

16211



Class \_\_\_\_\_ No. \_\_\_\_\_

IN EXCHANGE.





Digitized by the Internet Archive  
in 2014







THE JOURNAL OF  
OPHTHALMOLOGY

OTOLOGY AND LARYNGOLOGY.

---

VOLUME VIII, 1896.

---

CHARLES DEADY, M. D., EDITOR.

ASSOCIATE EDITORS :

OPHTHALMOLOGY, OTOLOGY : F. G. RITCHIE, M. D.

LARYNGOLOGY : { CHARLES E. TEETS, M. D.  
WM. S. PEARSALL, M. D.

---

A. L. CHATTERTON & CO.,

133 WILLIAM ST., NEW YORK.

LAHIRI & CO., Calcutta.

DEC 13 1896



# THE JOURNAL OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

---

EDITOR.

CHARLES DEADY, M. D.

ASSOCIATE EDITORS.

F. G. RITCHIE, M. D.

CHARLES E. TEETS, M. D.

WM. S. PEARSALL, Ph. B., M. D.

---

## FIBROMATA OF NASO-PHARYNX.\*

BY J. E. MANN, M. D., OMAHA, NEB.

THE history of the case that I herewith present is like unto some that come to all of us, of more especial interest to the operator than to anyone else, because of the peculiar prominence and adverse prognosis given it by our colleagues of the old faith.

This being a prominent feature in the history of the case, and the fact that a fibroid of the naso-pharynx is not of common occurrence, has decided me to worry you with the subject at this meeting.

Before going into the details of the case, I will give a few general points concerning the disease. It does not differ essentially from similar neoplasms in other parts of the body, except that it is more apt to be pedunculated. It is here as in other places sessile at the start, but owing to the bony surroundings and the law of development in the direction of least resistance, it becomes elongated, extending down the throat and into the nares.

The pedicle grows to the size of the upper pharynx, which is about  $\frac{3}{4}$  of an inch by  $1\frac{1}{4}$  inch, and until this cavity is filled it is sessile. By pressure due to increased growth, the surrounding parts, even the bone, yield and thus permit

\* Read before the Missouri Valley Homoeopathic Medical Association, October 3, 1895.



its extension into all parts of the nasal cavities, antrum of Highmore, or, as has been reported, through the base of the skull into the brain. Females are almost exempt from this affliction. While the negro women so often have uterine fibroids, Bosworth says he knows of no recorded case of naso-pharyngeal fibroid occurring in a negro. I have known of but one case in a female, and that was successfully removed by my colleague, Dr. Sumner Davis of Grand Island, Neb., who is with us to-day.

Of the fifty-eight cases collected and reported by Dr. R. P. Lincoln of New York, all were males and occurred between the ages of fifteen and twenty-five. Of my own two cases, both were males, aged eleven and thirty-four years. The age at which these growths start would seem to add some value to the theory of their origin as assigned by Sir Morell Mackenzie, viz.: that they were due to an irregular evolution during the growing period of a tissue which, under normal conditions, is exceptionally abundant on the under side of the base of the skull.

The tumor is of slow growth, and usually one of the first symptoms which presents is repeated attacks of hemorrhage. This may easily be mistaken for epistaxis or hæmoptysis.

If mistaken for simple epistaxis then the chances are an examination will not be made, and the true cause located, until the growth assumes such dimensions as to prevent nasal breathing, which of itself introduces a new set of symptoms such as sub-acute bronchitis, which, with the occasional hemorrhage, may cause the case to simulate closely one of pulmonary tuberculosis.

The hemorrhage may be absent until the tumor has filled the entire vault of the pharynx, when the nasal stenosis with accompanying dead voice will be the first symptom, and as the growth usually starts at about the center of the basilar process of the occipital bone, the stenosis is bilateral.

Extreme facial deformity and exophthalmus may be produced by the pressure of the growth into a sinus or a cavity, or against the bony floor of the orbit. The secre-

tion attending these cases is thick, tenacious mucus or muco-pus.

Dyspnœa occurs in proportion as the growth extends downward and interferes with the entrance of air into the lungs. When we consider that there is no limit to the growth of a naso-pharyngeal fibroid, that at any time in its development it may encroach upon some vital spot, and that the larger the growth the more dangerous it becomes, the importance of an early diagnosis will be fully realized.

Before the age of puberty, these growths develop more rapidly than in later life. At puberty the development is usually arrested, and cases are reported where spontaneous disappearance has taken place. It has been said that under the old method of removing these growths there were more deaths as a result of the operation than from the disease itself.

Basing a prognosis upon the results of the old method of operating, it would be extremely grave. With the improved methods of our own day, by which all affections of the upper air passages are so completely brought within operative reach, the prognosis is favorable in a large proportion of cases.

The diagnosis is usually easy, and even in the earliest stages there need be no mistake. By means of a rhinoscopic mirror an irregularly rounded tumor of light pink color will be distinctly noticed. With the finger we can determine its density, immobility, and sessile nature, and thus differentiate it from the polypus, which, though it may attain considerable size, still retains the small pedicle from which it springs.

As the tumor develops in size, inspection and palpation become more simple and the diagnosis more certain. Osteoma and enchondroma can be recognized from their density by use of the probe or needle. Malignant growths present no appearance similar to the fibroid. In the treatment of these cases I have had no experience with the indicated remedy, but am charitable enough to hope they may be thus cured. Who knows but that the reported cases of spontaneous disappearance was due to the dynamic effect of some well-directed simillimum?

For myself I confess a weakness for surgical measures, which must vary to suit the case. The old method of removal was by evulsion, either with wire loop, hook, or forceps. The excessive size attained by the growth sometimes rendered this method impracticable, and then they opened up the face to obtain free access to the tumor.

This primary operation consisted of temporary depression or resection of a part or the whole of the lower half of the superior maxillary bone, section through the nasal bones and septum, section of the malar bone, or removal of the hard palate. In a record of thirty-eight cases in which one of the above named measures was resorted to, as reported by Lincoln, there was cure in ten cases, eight deaths, eleven recurrences, and nine in whom results are not given.

Seven were palate operations with two cures; one death and one no report. Ligature and snare used in three cases; one cure and two recurrences. Electrolysis in three cases; one cure, no report two. The galvano-cautery was used in fourteen cases, with eleven cures and recurrence in three cases.

The removal by electro-cautery, when properly manipulated, is probably the most successful, but in many respects is very objectionable. The placing of the soft platinum wire in position is very difficult. The wire under white heat is quite liable to break, thus necessitating quite a delay. Again the white heat does not prevent hemorrhage. The slough that follows is very objectionable to the patient as well as to all around him.

Electrolysis applied by needles stuck deep into the tumor will always reduce its size, and many cases of cure by this treatment are reported, the needles being left in the tumor from ten to twenty minutes every five or ten days.

I believe the cold wire snare is the easiest and safest means of eradicating these growths when they have attained a size sufficient to allow them to be caught in the loop. In one case, above eleven years old, I removed one the size of a small acorn with a sharp pharyngeal curette. Two years later there was no recurrence. The fact of no



recurrence in this case I believe to be due to the thorough curetting of the vault and removal of all redundant tissue.

Nearly all cases when first diagnosed are of sufficient size to allow the use of the snare. Considerable care should be given to the selection of the wire and the snare. Steel piano wire is the best. Its rigidity greatly facilitates the placing of the loop. The snare should be of larger size than the ordinary instrument, and the common screw nut replaced by a bar of sufficient length to give a purchase.

To demonstrate these two points, the following case will suffice. In April of the present year I was called in consultation by Dr. E. N. Leake of Fremont, Neb., to see a case of "tumor of the throat" in a man aged thirty-four years. For several days he had been having repeated and severe attacks of hemorrhage, until he presented the appearance of being exsanguinated. As hemorrhage had ceased, there was nothing to be done but advise perfect quiet and nourishing diet. He was taking from the doctor *verat. alb.* and Hensel's tonicum, which was not changed.

No effort was made to manipulate the growth for fear of starting the hemorrhage, but it could be seen hanging an inch below the soft palate, and also in the nostril, presenting that characteristic light pink appearance with several large vessels coursing over its surface which made the diagnosis easy.

His wife gave me the following history, afterward verified by himself. The growth had been coming for several years. Two years ago he went to one of our leading old-school nose and throat specialists of Omaha, who for a year used electrolysis, and succeeded in reducing the growth materially, but who refused to use radical means for its removal, saying that death would ensue.

It being an exceptional case, during his treatment every old school surgeon of any note in our city had the pleasure of seeing it, and prognosing death in case of radical removal. It was no easy thing to overcome his fear of death in case of an operation, but as he had been so near death from the hemorrhage, and as it was impressed upon him that the hemorrhage would recur sooner or later, and he would not

lose as much by the operation as he had from the hemorrhage, he finally consented, and on May 28, with Dr. Leake present, and after a thorough use of cocaine, I placed a loop of No. 5 steel piano wire through the left nostril and around the tumor, using the fingers in the vault to get it in place. The snare used was the Ingalls', and the disk screw nut was turned with a large pair of forceps.

Fully half an hour had been spent in very slowly tightening the loop, when our mistake in selecting the size of wire was made plain by its breaking. A new loop was placed, and the wire drawn through the canula and attached to a Smith's straight uterine snare with bar screw nut. Another thirty minutes of tightening the wire on a straight line and it gave another snap.

A third loop was placed, only to break after another strain. Laying aside the snares, I took up a pair of Pratt's long curved scissors, and with them through the left nostril, the points being guided by my middle and index fingers in the vault, I soon succeeded in clipping away the remaining part, removing the tumor with fingers through the mouth.

About a pint of blood was lost, most of the hemorrhage occurring when the wires broke, and after use of the scissors. Had our wire been sufficiently strong, it would have been almost bloodless. The diameter of the pedicle was one inch, the length of tumor three inches, and two inches thick at the pendent part.

The hemorrhage after the use of the scissors was very slight, so I did not pack the vault, but left it open. The next day douches of bicarbonate of soda solution were commenced, and continued each day until the discharge showed no blood.

The doctor for some time used the galvanic current, placing the negative electrode in the vault of the pharynx. He reports the vault smooth, with no indication of recurrence, which would hardly be expected at his age. Soon after the operation he very kindly visited our old school brethren, and after informing them of what had been done, was met with the encouraging reply: "You are a very lucky man."



# THE SENSITIVENESS OF THE EYE TO THE COLORS OF THE SPECTRUM; THE FUNC- TIONS OF THE RETINAL ELEMENTS AND VISUAL PURPLE.

BY H. PARINAUD, PARIS, FRANCE.

(Concluded from page 330, October, 1895).

## THE NATURE OF THE ACTION OF VISUAL PURPLE.

HOW does the visual purple produce, in the retina, this peculiar modification, which augments so markedly its sensitiveness for certain rays?

It may be supposed that the purple either modifies the nerve element, the rod, by augmenting its excitability, in the same way that strychnine does, or that it increases the intensity of the excitation.

If we view only the rough fact of the increase of sensitiveness, this is the first explanation that naturally presents itself to the mind. Moreover, it finds some support in the fact that the regenerated purple does not rest simply in contact with the rod, but is actually absorbed by the nervous element. It is by increase of excitability that I have explained this phenomenon in my former writings.

This interpretation is, however, insufficient. It is difficult to explain, in this way, an increase as great as that produced in the blue and violet rays, and, moreover, it does not explain at all why the red rays are not affected.

*The action of the visual purple is of the same nature as the phenomena of fluorescence or phosphorescence.*

It is known that the employment of fluorescent substances is one of the means used to demonstrate the

existence of the actinic rays of the spectrum, by rendering them visible. But these actinic rays may become visible without the aid of any fluorescent substance. If, says Helmholtz, by means of a special apparatus we completely suppress the other rays, the ultra-violet become at once easily visible, even to the extremity of the solar spectrum. Helmholtz suspected that the visibility of the actinic rays was due to the fluorescent properties of the eye, and his experiments undertaken in this direction led him to the discovery of the fluorescence of the retina. But this fluorescence, according to him, is but little superior to that of paper and does not explain the perception of the ultra-violet rays, for, besides the fact that the fluorescence is feeble, the greenish tint of the light emitted by the retina differs from that which gives us the perception of these rays.\*

Setschenow, undertaking the same experiments, reaches the same conclusion, that is, that the fluorescence of the retina is not the cause of the visibility of the ultra-violet rays. He believes, however, that the general sensation of light produced in the eye by these rays can be explained by the fluorescence of the transparent media situated in front of the retina, and by that of the crystalline lens in particular.†

Edmond Becquerel, having proved that by being placed in certain conditions the eye is able to see not only the actinic rays, but the obscure lines in this part of the spectrum, concludes as follows: "But is it not by a peculiar phosphorescent action of the humors of the eye that this effect is produced?" ‡

The researches of Helmholtz and Setschenow were made after the discovery of visual purple by Boll. The works of Ewald and Kuhne§ abundantly establish the fact that the retina owes its fluorescent properties to the visual purple.

\* Helmholtz, *Poggend. Ann.*, xciv, p. 205.

† Setschenow, *Graefe's Archiv*, Bd. V., p. 205, 1859.

‡ Ed. Becquerel. *La lumière ses causes et ses effects*, T. 1, p. 145, 1867.

§ Ewald and Kuhne, "Recherches sur le pourpre visuel." *Laboratoire de Physiologie de l'Université de Heidelberg*, fasc. II, pp. 169-185.

The rods only are fluorescent, and those in the periphery of the retina, behind the ora serrata, that are wanting in purple, do not possess this property. Moreover, the fluorescent properties of the purple vary according to the modifications of the light received. The visual purple proper gives a white, and the visual yellow or modified purple, a green fluorescence. The last transformation of the visual purple caused by the action of light is the blending of the green with the visual white. In conclusion, upon comparing the fluorescence of two retinæ blanched in different ways, one by exposure to light after the extraction of the eye, the other by exposure to light while the animal is alive, it is found that the fluorescence in the first case is much greater than in the second, where it is very small.

This explains how Helmholtz and Setschenow, who made their examinations of the retina without having taken the precaution of placing the animal in the dark, that is, upon *retinæ blanched during life*, found this membrane very slightly fluorescent. The objection raised that the feeble fluorescence of the retina eliminates its action in the perception of ultra-violet rays, is not sufficient. This differentiation between the green color of the objective fluorescence of the retina under excitation by the ultra-violet rays, and the sensation of white or grayish lavender caused by these rays upon the eye is also untenable, since the green color discovered by Helmholtz exists only when the purple is modified by light; the fluorescence becomes blanched when the retina is subjected to darkness and the purple unchanged. Moreover, the argument is bad for another reason. We have seen that there is not necessarily any correlation between the objective properties of the luminous agent and the sensation which it causes, especially in conditions where the actinic rays become visible, that is, in a retina capable of maximum nocturnal adaptation. We know that, under these conditions, the purest color may be perceived as white.

These objections removed we find ourselves confronted

by this fact: the existence in the retina of a fluorescent substance and the probability that in the perception of the ultra-violet rays the visual purple plays the same part as that of other fluorescent substances employed to render the actinic rays visible.

To return now to our subject, we notice that the visibility of the violet rays is only a consequence of the general property which the retina possesses of growing extremely sensitive to rays of greater refrangibility when it is subjected to darkness. Helmholtz and all those who have made observations upon the visibility of the actinic rays, insist upon the necessity of completely veiling the other parts of the spectrum. It is not exactly because this procedure renders the actinic rays visible, but because, in order to see them, it is necessary that the retina be strongly adapted by darkness, and the rays of the spectrum normally visible destroy the effect of darkness in the same way as does the surrounding diffuse light.

Our experiments show that the increase in the sensitiveness of the retina subjected to darkness is a function of the visual purple. They show also that the fluorescence of the purple enters into this function.

We remark first that the fluorescence of the purple is augmented by subjection to darkness, and that it disappears almost entirely when sufficiently exposed to light during life. The modification of retinal sensitiveness, of which the purple is the cause, is produced in the same way. It may then be presumed that the two functions are joined together.

We note again that where the retina is subjected to darkness and has acquired its fluorescent properties by the regeneration of the purple, the sensation produced upon the retina by different colors, particularly blue and violet, presents a very strong resemblance to that given the eye by fluorescent bodies. *This sensation is something special*, and this peculiarity ought to strike those who have made experiments with the ultra-violet spectrum.

But we have more direct proof of the part played by the fluorescence of the purple.



It is known that the characteristic of fluorescence, properly so-called, or epipolar diffusion, is the absorption of certain rays of the incident light by the fluorescent body and the restitution of the same rays transformed. According to a law established by Stokes, the light emitted is always of less refrangibility than the light absorbed. It is known, on the other hand, that it is the violet and ultra-violet rays that are most apt to develop fluorescence. If a spectrum is made to fall upon different fluorescent substances, in a large number, the phenomenon is only appreciable in the ultra-violet and violet regions. With certain substances it is visible in the less refrangible parts of the spectrum, but grows weaker as the red is approached. With esculin, bisulphate of quinine, and uranium glass, it extends as far as the line F. With cucumis and guiacum, as far as the line D. But it has not been observed beyond that point. No one, as far as I know, has developed fluorescence with the red rays.

How can one help being struck with the similarity existing between the character of fluorescence and the action of the visual purple upon the sensitiveness of the retina? This action, especially pronounced with the violet and ultra-violet rays, diminishes with the less refrangible colors and becomes nothing with the red rays. Is not this proof that this action of the visual purple is due to its fluorescence?

I do not believe, however, that the action of the visual purple can be completely identified with the fluorescence or phosphorescence developed in inorganic substances. In this case the absorption of light by the substance and its restitution with a lesser refrangibility does not seem to be accompanied by any liberation of electricity or heat. There is, in spite of appearances, no increase in the energy of the luminous agent, the phenomenon being entirely physical in its nature. In the phosphorescence produced by the decomposition of organic matter, it is probable that this is not the case. In the phosphorescent light emitted by certain living animals it is certain that this is not so. The already



old experiments of Macaire and Mattenei, and the more recent and very complete researches of Raphaël Dubois,\* have demonstrated, among other peculiarities, that the light produced by fireflies disappears if they are deprived of oxygen, or placed in a vacuum, or in carbonic acid ; while it reappears if they are replaced in an oxygenized medium. The production of their light is connected with a phenomenon, physico-chemical in character, which itself depends more or less directly upon vital action. On the other hand, the rôle of fluorescence, properly so-called, is demonstrated by the existence of a fluorescent substance in the organ which is the seat of the light. After triturating the matter found in these organs, if the residue be diluted with water and filtered, a liquid is obtained lacking all trace of organization and at the same time very fluorescent.

What we know of the functions of the luminous organs of fireflies enables us to give a more complete account of the intimate action of the visual purple.

The action that governs fluorescence does not appear to be purely physical in character, but physico-chemical and capable of producing energy. This, at least, seems proved by the experiments of Dewar and Joannès Chatin.

Dewar † recognized in 1874, that is, after the discovery of visual purple by Boll, that the action of light upon the retina was accompanied by the development of electromotive force, measurable by the galvanometer. He recognized the influence of retinal fatigue upon the force of the current and the unequal action of colors of different refrangibilities. The experiments of Joannès Chatin ‡ confirm those of Dewar. They establish the effect of darkness upon the intensity of the current, the unequal action of different

\* Raphaël Dubois. *Les elatérides lumineux. Contribution à l'étude de la production de la lumière par les êtres vivants.* (Thèse de doctorat ès sciences naturelles, 1886.)

† James Dewar, "The Physiological Action of Light" (British Royal Institute, Friday evening lectures, 1875).

‡ Joannès Chatin, "De la chromopsie chez les batraciens, les crustacés, et les insectes," 1881.

rays, and the greater force of the current in those species where the visual purple predominates, as in lobsters.

There is no doubt that Dewar's current was not the principal cause in the physico-chemical reaction of which the visual purple is the seat, as was suspected by Giraud-Teulon.\* Meanwhile, taken altogether, the activity of the vital energy, in whatever tissue it may be located, seems to be accompanied by a modification analogous to electromotive force. But if we consider that the current of Dewar is manifestly developed only when the animal has previously been subjected to darkness, and if we consider also that it is developed unequally in rays of different refrangibilities, and that it is *not developed at all by the red rays*, we find in the concordance of these facts with our experiments the proof that this liberation of electricity is not the result of a common reaction by which it may be obtained from all tissues, and it becomes evident that the principal cause of this current resides in the physico-chemical reaction, the seat of which is the visual purple.

This being admitted, it is easy to explain how the retinal sensitiveness to certain rays is developed, in so considerable a degree, by the visual purple. The physical fluorescence of the purple evidently plays a part, but it does not seem that the phenomenon can be explained solely by the change in the refrangibility of the incident rays, and by the transformation of the invisible actinic rays into visible rays. If to the physical action of the fluorescence of the purple, is joined a chemical action capable of the development of energy, as in the luminous organ of the firefly, the phenomenon finds a more natural and a more satisfactory solution.

I would remark, in passing, that this process, capable of producing energy, may give us an explanation of the *intrinsic luminosity of the retina*, to which Goethe and Helmholtz called attention without discovering its cause.

There are then in the human retina two distinct modes of

\* Giraud-Teulon, "Fixation des images rétinienne," *Bull. de l'Acad. de Méd.*, 1879.

sensibility to light. First, that of the cones or elements lacking in purple, which are relatively fixed, at least, in so far as pertains to the phenomenon of sensitiveness. Second, that of the rods and visual purple, which change the intensity of the sensation of light in a remarkable degree, according to the surrounding light. Moreover, they produce a very unequal variation according to the refrangibility of the light, due not only to modification of the intensity, but the quality of the sensation produced upon the eye by simple rays.

These variations are the essence of the function, which is itself dependent upon the production of purple, that is, of a true secretion that probably presents individual differences and varies according to the state of nutrition in the same individual, as I have proved upon myself. Certain irregularities of general nutrition go so far as to abolish, more or less completely, this function of the rods and purple, and produce hemeralopia.

What value should be given to measurements of visual sensitiveness when no account has been taken of these properties of the retina? For even taking into account these properties, the figures by which we express the sensitiveness of the eye to light and color can have only a very relative value.

It is impossible that facts so clearly evident as these, which we have studied, and that such decided variations of retinal sensitiveness have not been brought to the notice of observers in some form. They have had glimpses of them, in fact, for a long time, but no one, to my knowledge, has clearly defined them, no one has recognized their cause, nor their precise significance.

Purkinje remarks that the blue may be seen with a feeble illumination while the red requires a very strong light. Later, Dove observes that if the luminous intensities of surfaces of different colors be compared under different illuminations, sometimes one color and sometimes another will appear the brightest. On the other hand, in the determination of the intensity of two sources of light by Rum-



ford's method, it is known that the comparison of the shadows projected does not give exact results if the lights are of different colors. The variation in the intensity of colors according to the illumination is designated by the name of phenomena of Purkinje. It is but fair to notice that these phenomena may be explained very naturally by the properties of the retina which we have been studying. It is not the difference in the brightness of colors that varies their relative intensity, but *the difference in the clearness of the eye that observes them.*

In his observations upon zodiacal light, Secchi remarks that if a composite light attains a certain minimum, it may become sensibly monochromatic.\* Many other observers have noted that with a feeble intensity colors give hardly more than a sensation of light, at the point where they disappear. But it is an error to admit as a law, the dissociation of the sensation of light from that of color, as Charpentier has done.† Kunkel makes an exception in the case of red.‡ We have seen that in the fovea this dissociation does not exist for any color.

The relative insensitiveness of the fovea has been noted by Arago, who, in his astronomical observations, has recognized the fact that stars are seen better when the eye is slightly deviated than when fixed directly upon them. Hering, Hess, and Sachs attribute this to the absorption of light by the yellow substance of the macula. I do not know exactly what may be the absorbing power of the yellow pigment of the macula, the action of which is unknown, but it certainly is not the cause of the phenomena that we are studying. This insensibility results from the non-participation of the macula in the increase of sensitiveness that characterizes nocturnal adaptation. The proof is that the relative insensibility becomes evident according as the eye is subjected to darkness and tends to become effaced

\* Secchi, *Compte rendu de l'Acad. des Sciences*, 1892.

† Charpentier, "Le sens de la lumière et le sens des couleurs," *Arch. l'Ophth.*, 1880.

‡ Kunkel, *Pflüger's Arch.*, T. ix.

when the eye is not adapted. In the light of day, in fact, the difference is no longer appreciable. Moreover, the fovea or central part of the macula contains no more of the yellow pigment than of the purple, and if the intensity is not absolutely limited to the fovea, it is at this point that it is the most evident.

In a recent work, König\* has studied the character of the relative insensibility of the macula, and his observations coincide in a general way with mine. He has established that this insensibility is nothing for the red rays. He insists upon the insensibility to the blue, and upon this he bases a theory of the perception of colors, but he recognizes that it exists for the green, is uncertain about the yellow, and says nothing about the violet. He also recognizes that with simple light of increasing intensity, the first sensation perceived in the macula is that of color. Similar observations were also made by Fick.†

Relative to the rôle of the visual purple, it is remarkable that Kuhne, after his experiments upon frogs, should have suspected that it was connected with the perception of light. Frogs seem to have a predilection for green, for, if after having exposed them to the sun, and thus deprived them of visual purple, they are placed in a glass bowl, covered partly with green and partly with deep blue, they always choose the green. The same experiment upon frogs kept in darkness does not result as strikingly. The author concludes that probably color affects the elements lacking in purple, that is, the cones, and that the rods perceive only differences between light and darkness.

G. Berry remarks that of the three elements that constitute the impressionable part of the retina, the cones, and rods and the pigment, it is the last only that is distributed throughout the retina and, as the perception of light is also distributed throughout this membrane, supposes

\* Arthur König, "Sur le pourpre visuel et sa signification dans la vision," *Sitzungsl. der könig. Preuss. Acad. der Wiss. zu Berlin*, 21 Juin, 1894.

† A. E. Fick, *Pflüger's Archiv*, Bd. xliii, 1888.



that the pigment is connected with the perception of light.\*

Following me, Kuschbert, Velardi, and Treitel have admitted that hemeralopia may result from disturbances in the secretion of visual purple.

Hering has noted an important fact. In a person blind to all colors, he observed that the sensitiveness to the clearness or white value of the colors was the same as that of the normal eye.† This is not surprising and accords fully with our views. The curve established by the minimum of clearness with which the colors of the spectrum are perceived is only another curve  $bh$  (Fig. 2), and, we know that this curve expresses the function of the rods and visual purple, which is altogether distinct from the chromatic function.

Not only is the visual purple foreign to the chromatic function, but its action alters the sensation of color as the simple rays strike upon the eye. Certain physiologists, more recently Ebbinghaus and König, have sought to prove that the visual purple and its derivative, the visual yellow, have for their function the perception of color. In the work which I have cited, König thinks that the purple is the cause of the sensation of the fundamental color, blue, because of the insensibility of the fovea to blue, and the absence of purple in that part of the retina. He admits hypothetically two other substances for the other fundamental colors, green and red, substances that act upon the cones in the same way that the purple acts upon the rods. Ebbinghaus ‡ has already advanced analogous ideas concerning the action of the purple, with this difference, that he inclines to the theory of Hering, the same as König inclines to that of Helmholtz. I would simply remark that the insensibility of the fovea is not confined to the blue, but exists in varying degrees for all colors, with the

\* G. Berry, "Présomption sur les fonctions de certains éléments rétinien," *The Ophthal. Review*, 1890.

† Hering, *Archiv f. d. Ges. Phys.*, Bd. xlix.

‡ Ebbinghaus, "Théorie de la vision des couleurs," Hambourg, 1893.

exception of red ; that it is not, properly speaking, a blindness to the color blue, but a relative insensibility to the white value of blue, *in darkness*. The fovea perceives blue as well as other colors, and it is this part of the retina that gives us our purest sensation of color, the blue as well as others.

The principal facts that serve as a basis for my work have been recorded in different publications or notes to the *Academie des Sciences*, the first of which appeared in 1881.\* when I said in particular :

“ That the increase in the sensitiveness of the retina in darkness, affects, unequally, rays of different refrangibility ; that this increase of sensitiveness acts only upon the luminous intensity or white value of colors ; that this increase in sensitiveness is absent in the fovea ; that, in the fovea simple rays of increasing intensity give primarily a sensation of color.”

I said further : “ That it is the impression upon the cones that becomes specialized in a sensation of color, but that this impression is made in the brain ; that the rods and purple are connected with a special function of the retina, its adaptation to differences of intensity of the surrounding light and nocturnal vision.”

\* H. Parinaud, “ De l'héméralopie dans les affections du foie et de la nature de la cécité nocturne,” *Arch. Gen. de Méd.*, Avril, 1881 ; “ L'héméralopie et les fonctions du pourpre visuel,” *Acad. des Sciences*, Août, 1881 ; “ De la sensibilité visuelle,” *Acad. des Sciences*, Août, 1894 ; “ Sur l'intensité lumineuse des couleurs spectrales,” *Acad. des Sciences*, Novembre, 1884 ; “ Sur l'existence de deux espèces de sensibilité à la lumière,” *Acad. des Sciences*, Octobre, 1885.

## MATERIA MEDICA OF THE EAR.

BY WM. E. ROUNDS, M. D., NEW YORK.

**H**EPAR SULPH. CALC.—Purulent discharge from the ears. Increased earwax. Heat, redness, and itching of the external ears. The external ear is painful at night when lying upon it. Violent stitching pains in the ears when blowing the nose. Crackling in the ears when blowing the nose. Crackling in the ears as from electric sparks. Crackling in the right side of the head after violent blowing of the nose, after which the noises disappear and he hears much better. Roaring in the ears. Throbbing in the ears. Whistling in the ears when blowing the nose. Discharge of fetid pus from the ear.

*Extreme sensitiveness to contact* is the keynote of this remedy. *Children refuse to have their ears examined; they seem to have an unnatural dread of contact with the instruments. Even adults shrink from having the ears examined. Slight contact causes much pain.* Dread of contact that is out of proportion to the actual pain caused. The canal, in suppurative inflammation of the drum, is filled with white, cheesy, or sometimes bloody pus, that irritates the skin with which it comes in contact. Little pustules appear in the external auditory canal, and on the auricle and other portions of skin with which the discharge from the ear has come in contact.

Hemorrhage from the ear is produced by slightest contact. *There is always a decided relief from warm applications and from keeping the head and affected ear warm.* The patient goes about with his head wrapped up in a



flannel blanket, and gets his only sleep with his head resting against a bag of hot salt or hops. In a number of cases of mastoid disease with great tenderness and redness of the mastoid process, this remedy has acted well after *capsicum* has failed to relieve. Sometimes *gelsemium* acts well with *hepar sulphur* when there is a dull occipital headache and slow, full pulse—a very frequent condition in mastoid disease. The nasal symptoms of *hepar sulph.* are quite characteristic. The bones of the nose are painful to the touch. *Contractive sensation* in the nose. *Swelling and redness of the end of the nose caused by painful small pustules that form at the junction of the alæ with the septum.* Ulceration of the nasal septum that is very painful, with discharge of thick, bloody pus. Pain in the nose when blowing, with discharge of thick, tenacious, bloody, bad-smelling mucus. The sense of smell becomes very acute, and the nostrils become very sensitive to cold air. In many cases of *chronic suppuration of the middle ear*, and *mastoid disease* in pale, debilitated individuals, I have found benefit from the use of *ferrum phosphoricum* in alternation with *hepar sulph.*, and the same may be said of *calcareo phosphorica* in phthisical subjects.

IGNATIA.—He feels a beating deep in the ear. Tingling in the ears. Stitching pain deep in the ears. Music excites a most pleasant sensation in the ears. Hardness of hearing for all sounds except the human voice. Insensibility to music. This drug causes at first great sensitiveness of hearing, with singing and roaring in the ears, followed by dullness of hearing, especially for musical sounds. The only verified ear symptom of *ignatia* with which I am acquainted is, "he hears speech better than other sounds." It should be a remedy for disturbances of the labyrinth, with over-sensitiveness of the auditory nerve.

IODINE.—Tearing pressure in the fossa beneath the ear, and in the neighboring part of the neck. Earache. Sensitive to noise. Ringing and roaring in the ears. I have found this remedy useful in chronic suppuration of the drum, with a thin, ichorous discharge and painful enlarge-



ment of the glands in the immediate vicinity of the ear, *especially when the chain of lymphatics in front of the tragus is involved*. The nasal symptoms are quite prone to be prominent. Discharge of green and bloody matter from the nose. Violent attacks of sneezing, and coryza, with excoriating discharge. The nostrils become plugged up, and the edges of the external orifice become red and sore. The nostrils become stopped, so that he cannot easily breathe through his nose, accompanied by a thin, ichorous discharge and a pressive pain in the frontal sinuses. Iodine should be thought of in chronic catarrh of the drum, as well as in chronic suppuration.

ODOFORM.—Ears feel dry and feverish. The ears feel too full. Neuralgic pains in the ears. Dullness of hearing. This remedy has been found useful in septic meningitis as the result of mastoid disease.

KALI BICHROMICUM.—Slightly inflamed swelling at the entrance of the meatus auditorius externus, which was more annoying than painful. Stopped feeling in the ears. Pressing out sensation in the ears. Stitches in the ears and in the mastoid process. *Stitching pains in various parts of the ears*. Roaring in the ears. Roaring and ringing in the ears. The ear symptoms of this remedy are not at all characteristic with the exception of the *stitching* and *drawing* pains. It is indicated when there is a discharge of thick, yellow, sometimes fetid matter, that is very tenacious or ropy. Sharp, sticking pains in the middle of ear with a great deal of itching. Ulcers upon the membrana tympani that are not painful excepting the occasional sharp, sticking sensations. Indolent ulceration of the drum cavity. Granulations of the tympanic cavity that throw off a tough, ropy mucus that is darker in color and more offensive than that of alumen ust. This remedy acts well when applied locally. Applied in saturated solution, it will often destroy granulations rapidly. It must be applied with great care, however, as it is liable to set up violent diffuse inflammation if it is allowed to come in contact with the lining of the external auditory canal. I have found a powder com-

posed of *boric acid* and the 2x trituration of *kali bichromicum* of great value locally in the treatment of indolent granulations of the tympanum. The patients calling for *kali bichromicum* usually suffer from a naso-pharyngeal catarrh with the following symptoms: Ulcerations in the nostrils. *The whole membrane of the septum dotted with minute ulcerations. A large deep ulcer on the septum. Ulceration of the septum with perforation that has the appearance of being syphilitic. Formation of plugs in the nostrils. Constant discharge from the nostrils; it is sometimes watery and at other times thick, yellow, and ropy, and often offensive and streaked with blood. Lining of the nostrils very dry. The patient complains that the nose is dry and is filled with dry plugs. Pain and hemorrhage is produced by the removal of these plugs. Pain and sensation of pressure in the ethmoidal region. Loss of the sense of smell. Offensive odor in the nose.*

KALI CARBONICUM.—Redness, heat, and violent itching in the external ear. Soreness and suppuration behind the ears. Inflammation and swelling in the external auditory canal. Boils in the ear. Stopped sensation in the ears. Sticking pains in the ears. Sensation as if warmth streamed out of the ears. Tearing pains in the ears. Throbbing in the ears. Itching and tickling in the ears. Hardness of hearing. Bubbling and crackling in the ears. Roaring in the ears.

KALI IODATUM.—Otorrhœa of yellow matter often streaked with blood. Tearing pain in the ear and feeling as if something had fallen in front of the ear. Digging pain in the ear as if an insect had got into it. Lancinating and tickling pain in the ears with desire to cough. *Tearing pains in the ears. Severe tearing pains in the temporal bone. Severe tearing pains in the temporal bone, worse at night. This remedy has been found useful in some cases of mastoid disease. It should be thought of when the pains are of a tearing character always worse at night. Also when there is an irritating offensive discharge from the ears with tearing pains in the temporal bone. During the day a dull,*

tense, numb feeling in the temporal bone, especially in the region of the mastoid process, that becomes an intolerable aching during the night. In a case of *mastoid disease* in which this remedy was used successfully there were repeated sudden shocks of pain. It was of great benefit in a case of *mastoid disease*, in which the mastoid process had become so diseased as to cut like cheese. Acute inflammation of the drum cavity, acute coryza; great redness of the mucous membrane of the eyes, nose, and throat with profuse lachrymation and violent sneezing.

KALI MURIATICUM.—The indications for this remedy are mostly clinical. It is probably now used at the New York Ophthalmic Hospital for chronic catarrh of the middle ear more than any other one remedy. I give it in nearly every case of progressive deafness, in which there are no throat symptoms to point out a better remedy. It is a valuable remedy in the atrophic stage of naso-pharyngeal catarrh and will assist local treatment in the restoration of the functions of the mucous membrane. I have seen this remedy in many cases positively check the progress of a catarrhal deafness without the aid of any other treatment. I have known it to help some of the most desperate cases of proliferous inflammation of the drum. I have in some cases continued the constant use of this remedy for many months and have never been able to trace to it any injurious effects upon the kidneys, such as we so often get from the continuous use of other preparations of potash, especially the *kali chloratum*. *Kali mur.* is one of our best remedies for chronic hypertrophic suppurative inflammation of the middle ear. The granulations in the canal are often abundant or the middle ear is filled with hypertrophied mucous membrane. It is a good remedy for the increasing deafness that often keeps pace with the gradual stopping of a long-standing suppuration of the drum. It is very much like baryta mur., but the glands in the vicinity of the ear seem less involved.

LACHESIS.—A feeling of numbness in the concha with good hearing and without roaring, and on pressing



upon it it is also felt in the inner parts. Cutting pains in the upper parts of the auricle. Pain in a small spot when touched in the petrous portion of the temporal bone. Throbbing in the bone behind the ears. Pain in the ears with a sore throat. Earache in the right ear relieved by warmth and by lying on the right side. Contractive pain deep in the left ear. Extremely sensitive to noises. Hardness of hearing. Crackling in the ears. Roaring in the ears. Whizzing as from insects in the ears.

LYCOPODIUM.—*Otalgia* in the open air. Pressure in the ears. *Tearing pains in the ears*. Throbbing and tension in the ears. *Rush of blood to the ears*. Sensation as if hot blood rushed into the ears. Humid scurf on and behind the ears. Discharge from the ears. Sensitiveness to noise in walking. Music and sounds affect the ears painfully. Roaring, humming, and whizzing in the ears. Gurgling as of bubbles of air in the ears. *Lycopodium* is useful for scrofulous subjects and those who suffer from moist eruptions and scurfiness behind the ears. I have found it useful especially in female subjects who suffer from uterine disease, more particularly at the menopause. The usual symptoms are rush of blood to the ears and a scurfy eruption behind the ears. It has been found useful in chronic suppuration of the middle ear with offensive discharge. Sluggish ulceration of the membrana tympani without the great sensitiveness of *hepar sulphuris*.

MAGNESIA CARBONICA.—*Tearing pain in the ears and in the teeth*. *Neuralgia of the trifacial*. Whizzing in the ears. Violent roaring in the ears. Whizzing, *fluttering and buzzing* in the ears. *Fluttering as of a bird in the right ear*. The latter symptom I have verified. I have found the *magnesia phosphorica* more useful than the *carbonate* in neuralgia of the ear, and also in proliferous inflammation of the drum in delicate, nervous women. It usually acts well with *kali muriatum*.

MERCURIUS.—Dragging pains in the ear. The ear and meatus are painful and inflamed. Both the external and internal ear feels inflamed. *Soreness and excoriation of the*



*external auditory canal.* Polypi in the ear. Discharge of blood and fetid pus from the ear with pain and sensitiveness. Discharge of pus from the ear with pain through the affected side of the head. Hardness of hearing in both ears that is relieved by swallowing or blowing the nose. *Pulsative roaring in the ears.* Various kinds of ringing and other sounds in the ears that are always worse at night. *Mercurius sol.* is a valuable remedy in the treatment of suppurative inflammation of the drum. It is usually called for in the acute or subacute stage. In chronic cases that have taken cold and are suffering from earache it will frequently be found useful. The meatus is red, the pus thin, excoriating, offensive, and often bloody. The floor of the canal often has an irritated appearance, as though it had been picked up with a sharp instrument. The tympanum becomes filled with stagnant pus. *The pus does not flow freely from the ear. Pulsation of the pus in the middle ear. Pain deep in the ear with pulsation of the pus at a small opening in the membrana flaccida.* The pulsation at the inner extremity of the canal is a positive indication for mercurius. The pains are dull and constant, but always get worse as night comes on and better in the morning after rising. The patient looks haggard and pale, and suffers from free perspiration that gives him no relief. With this condition we usually use *ferrum phosphoricum* in alternation with *mercurius*. The iron seems to act as a much-needed tonic; more promptly relieves the pain and increases the action of the mercury. *Belladonna* is another remedy I frequently give with *mercurius*. When the throbbing in the ear is very great and painful, especially when the throat is red and dry and throbbing painfully, *belladonna* and *mercurius* are sure to act well together, with *mercurius* the fauces are bright red, the tongue large and flabby and indented by the teeth.

MERCURIUS IODATUS.—I use the *iodide of mercury*, usually the *proto-iodide*, when the glands in the throat and vicinity of the ear are involved with thickened and infil-

trated mucous membrane of the fauces and drum cavity accompanied by other symptoms of mercurius.

MERCURIUS DULCIS.—Of all the preparations of *mercury*, the mild chloride seems to be the most often called for in chronic catarrh of the drum. It appears to have a special affinity for the lining of the eustachian tubes. When this remedy is indicated, we find the external auditory canal dry and somewhat injected near its inner extremity, with more or less injection of the blood vessels along the handle of the malleus. Deafness increased by every cold that is taken, with all kinds of strange noises and a feeling as if a plug in the external auditory canal. A feeling as if he would have earache. The throat is usually red, flabby, and somewhat infiltrated. The uvula is somewhat elongated. The throat and region of eustachian tube are sore and the throat often has a dry, dark red appearance, like burnished copper. This is a remedy for proliferative inflammation of the drum, and in the early stage of this disease it overshadows kali muriaticum. Progressive loss of hearing with granular pharyngitis.

MERCURIUS CORROSIVUS.—*Pulsative buzzing and roaring in the ears.* This remedy has been found useful in chronic suppuration of the middle ear, with abundant granulations and stubborn offensive discharge. The best results have been produced by thoroughly drying the granulations and dusting upon them the ix trituration.

NITRIC ACID.—*Distensive pain in the ears.* Stitching, drawing, and tearing pains in the ears. Caries of the mastoid process. *Crackling in the ears when chewing.* Shooting pains. Sensitiveness of the bones of the ear. Aggravated by every change of temperature. Useful in caries of the bones of the ear, especially of the mastoid process, of syphilitic origin.

NUX VOMICA.—Stitching pains in the ears. Itching in the ears through the eustachian, obliging him to swallow frequently, especially at night. *Single sharp pains through the ears.*  *ringing in the ears.* *Roaring in the ears.* I find this remedy useful for removing some very disagreeable

symptoms of catarrh of the drum. My guiding symptom is *tinnitus and disagreeable "stiffness" of the ears that is always worse in the morning*. With this symptom there is usually soreness and rawness of the fauces. Burning in the throat, as though he had swallowed an acid, or as if the upper part of the throat had been scraped by a sharp instrument. Burning and itching in the region of the eustachian tube. Tinnitus and hardness of hearing, associated with nasal obstruction and *dull frontal headache*. It is a remedy for tubal catarrh of drinkers and smokers. It seems also to assist in restoring tone to the auditory nerves, and has benefited some cases of so-called nerve deafness associated with chronic catarrh of the drum.

PHOSPHORUS.—Dragging pains in the ears. Throbbing in the ears. One's own and other people's words resound strongly in one's ears, like an echo. Whizzing and humming in the ears. *Does not hear speech well*. This remedy has been used chiefly for the dry form of chronic catarrh of the middle ear. The guiding symptom is, *he hears other sounds better than the human voice. Musical sounds are heard distinctly, but he is almost unable to hear spoken words*. It should be useful in deafness following severe fevers.

PULSATILLA.—Pain in the ears, as if something would press out. Darting, tearing pains in the ears. Hardness of hearing, with severe pain in the ears. Severe pain with discharge of almost pure mucus.

Pulsatilla is a remedy for acute catarrh of the middle ear with a profuse bland discharge of a muco-purulent character. I have never known this remedy to be of use in chronic suppuration of the drum. It is frequently called for in children with subacute catarrh of the tympanum. This remedy has also been found of value in the treatment of diffuse and circumscribed inflammation of the external auditory canal, with the general symptoms of timidity, depression of spirits, and relief in the open air present.

SILICEA.—Drawing pains in the ears. Jerking, cutting pains in the ears. Itching in the ears. Discharge of offensive pus from the ears. The hearing is very sensitive.



Difficulty of hearing the human voice. Crackling in the ear when swallowing. Roaring and whizzing in the ears. Hard swelling of both parotid glands, with stitching pains in the ears. Swelling of the glands of the throat, with pain and rigidity when moving the head. This remedy will be useful chiefly in chronic suppuration in which there is caries of the temporal bone, with an ichorous offensive discharge. Itching of the middle ear and the inner extremity of the external auditory canal. Children dig at the ears with their fingers while asleep, causing a discharge of blood and pus. Ulceration of the middle ear, with sharp, stinging pains and itching, relieved by scratching and irritating the ear. Patients enjoy having the ears cleansed. This is especially noticeable in children who usually object to having the ears cleansed.

SULPHUR.—*Tearing in the ears. Stitches in the ears. Violent itching in the ears.* Sensitiveness of hearing. Music causes nausea in a person hard of hearing. Humming, whizzing, and crackling in the ears. *Discharge of offensive blood-stained pus from the ears, with intense itching. Severe itching in the ear, with pain when trying to relieve it.* Sulphur is a remedy for inflammatory conditions of the external auditory canal and chronic suppuration of the middle ear. In recurrent furuncular inflammation of the canal in scrofulous individuals, with a scurfy skin and sour-smelling perspiration, it will usually put a stop to the trouble. In chronic suppuration of the drum, I have not found it so useful as I expected at first; but for dirty, scrawny patients whose hands and faces proclaim their aversion to water, and from whose ears is flowing a dirty-looking, offensive, sometimes sour-smelling pus, *sulphur* will produce a much desired change. There is usually a great deal of itching in the ears, but any attempt to relieve it by scratching causes hemorrhage and pain.

TEUCRIUM MARUM VERUM.—A hissing sound in the ear when passing the hand through the hair and over the ear; also when using the voice. When blowing the nose a fine singing in the ears and a sound like the passing of air



through mucus. Stopped sensation in the ears that passes off with a dull report. Professor Henry C. Houghton has seen mucus accumulations in the middle ear disappear under the use of this remedy.

TELLURIUM.—This remedy may be used with great satisfaction when the discharge from the ears is thin and watery and very excoriating, with an exceedingly disagreeable odor, compared by some to the odor of stale fish brine. The skin with which the discharge comes in contact looks as though it had been scalded, so very excoriating is it.

## AUTOSCOPY OF THE LARYNX AND TRACHEA.\* —ITS INSPECTION WITHOUT A MIRROR.†

BY DR. ALFRED KIRSTEIN.

SCARCELY forty years have passed since the music teacher Manuel Garcia first obtained a view of the vocal chords in a living subject (and, indeed, a view of his own vocal cords) by the aid of a looking-glass introduced into the throat. In a short time the art of laryngoscopy was developed into a scientific method by Tuerck, and brought into universal recognition by Czermak. It is upon this firm foundation that the solid structure of modern laryngoscopy has been erected. The achievements of the laryngeal mirror as an instrument of diagnosis and a therapeutic means have not completely realized the ideal, but they are very significant and fill everyone who knows how to use the instrument skillfully with the greatest satisfaction. Reflection, as a principle in the examination of the larynx, has attained a dogmatic significance, and up to the present time no attempt has been made to view the interior of the larynx without the mirror. The assured self-satisfaction of the laryngologist in possession of an extremely efficient method, explains why reflections as a principle of the inspection of the larynx has not been questioned, and that until to-day the attempt to observe the interior of the larynx without the aid of a mirror has never been made. Neither do I believe that the attempt to use prisms

\* *Berliner klinische Wochenschrift*, 1895, No. 22.

† Vortrag, mit Demonstration, gehalten in der Berliner medicinischen Gesellschaft, am 15. Mai, 1895.

instead of mirrors could be considered, as the principle of reflection of light would be the same.

When, entirely without prejudice, we confront the problem of the inspection of the upper air passages, regardless of the astonishing results of a traditional art, it is by no means self-evident that we should be satisfied with the appearance of a mere mirrored image. The larynx does not lie so deeply hidden in the body that it would be a daring wish to view its interior directly with the unaided eye in close proximity and without the intervention of optical instruments. I have long believed that this problem could be easily solved. To accomplish this, it would be sufficient to equalize the angle which the axis of the mouth cavity forms with that of the trachea by bending the head backward and squeezing the tongue forward out of the way. I formerly made numerous experiments in this direction, which had this in common, that they failed to accomplish anything, that is, I saw only a piece of the epiglottis such as many people can bring into view without aid.

Let us now consider the results obtained by this new method. The entire autoscope is a scant 20 c. m. in length, so that the eye comes nearer to the vocal cords than when using the laryngeal mirror, which is 8 c. m. distant from the vocal cords. I have before me the organ itself in quite close proximity, without the intervention of any optical apparatus, and under favorable electric illumination. The picture seen in this way possesses so much more clearness and corporality than the mirrored image to which we have been accustomed, that, for one who has once enjoyed this newly disclosed view, a cautious comparison can yield but one opinion, and the mirrored image must sink (for its optical qualities) to the level of an imitation. It is wonderfully beautiful, and the heart of the connoisseur is entranced when he has frequently obtained a direct view of the flat surface of the interior of the posterior wall of the larynx, which, upon proper inclination of the autoscope, makes its appearance in such a way that, freed from the usual perspective shortenings, it is exposed in full width

and deep down as far as the trachea, ready for any instrumental manipulation. The so-called Killian \* method can not compete with this in any way. Nothing could be easier, for example, than to excise, curette, or cauterize with the proper instruments the daily presenting tubercular diseases of the posterior wall, and this could be done under accurate inspection of the process. If it requires particular skill on the part of the left hand, still the right remains free for purposes of operation. Tumors of the vocal cords, the subglottic region and the like, can be more easily and therefore not infrequently more radically removed than by former methods, although these are certainly very effective, but the better plan usually shows itself to be the enemy of the merely good. A complete set of autoscopic instruments for all operations that may occur is now being made under my direction.

The mucous membrane of the trachea above and below, right and left, before and behind, may be readily examined. The extraction of foreign bodies from the trachea must be more easily accomplished than by means of tracheotomy. Stricture may in certain cases be probed with the straight, stiff tube, so long as it is not in its nature impassable or a *noli me tangere* such as aortic aneurism and the like. Concerning these things sufficient experience is still wanting, but, as they are not beyond reach, an accessible way has been pointed out for their investigation, following which catheterization of the bronchi ought to present no great difficulty. I wish to thank Dr. Rosenheim for the verbal communication that on one occasion the tube made for the œsophagus slipped into the trachea, so that the examiners were surprised with a view of the bifurcation, the patient meanwhile breathing quietly. I am convinced that, with a correspondingly long, illuminated œsophageal tube of medium strength, one may penetrate intentionally through the rima glottidis directly into the cocainezied trachea down to the bifurcation. This experience may be realized by and by. Furthermore, if, according to the old

\* Killian, "Die Untersuchung der hintern Larynxwand." Jena, 1890.



established way, Rosenberg \* has succeeded in carrying a little three-cornered mirror through the glottis, in order to obtain a view of the doubly reflected image of the posterior wall of the larynx, how much easier it would be to pass a similar mirror on a straight handle through the autoscope into subglottic space and study the under surface of the cords in a direct reflected image.

That the epiglottis is invisible through my instrument is no defect, but a peculiarity of the autoscope, and, in a certain sense, is to be preferred. On the other hand, I must admit that it is a defect that, frequently, the anterior angle of the glottis does not come well into view. With increasing practice I have lately attained proficiency in the examination of the anterior commissure, but at the same time, the anterior angle of the glottis also escapes the view more frequently than we like, while using the laryngeal mirror.

Hitherto I have not had sufficient opportunities of examining patients under chloroform to form an opinion, still it seems to me that little children, with whom the mirror most frequently fails, might be very amenable to the autoscope under chloroform narcosis, after a solution of cocaine has been brushed upon the entrance of the larynx.

A new impulse came to me from the ingenious invention in œsophagoscopy with which, as you know, Mikulicz has presented the world. It is but a short time ago that you heard the report of our colleague Rosenheim,† in which it was shown that owing to necessary technical improvements contrived in part by von Hacker and in part by Rosenheim himself, a light, elegant, and easily handled instrument has been developed from the somewhat clumsy apparatus of the inventor. I have examined about fifty persons of different ages and constitutions with Rosenheim's œsophagoscope and have fully confirmed his claim, that œsoph-

\* Rosenberg, "Ein neues laryngoskopisches Instrument." *Therapeutische Monatshefte*, 1887, December.

† Rosenheim, "Ueber Œsophagoskopie," *Berl. klin. Wochenschr.*, 1895, No. 12.

agoscopy is usually a very simple and but slightly fatiguing method of examination. I go even further than Rosenheim when I say that, after my experience, I hold cocaine as well as every anæsthetic to be entirely unnecessary in œsophagoscopy. This new method has become finally the roundabout way by which I have reached the goal of my old laryngological problems. The patient being cocainized and placed in proper position, Rosenheim's long, straight, inflexible tube was introduced into the œsophagus. I then carried a second similar tube by the side of the first deep into the cavity of the mouth, and pressing the base of the tongue forward with a strong leverage movement, was able to push the end of the tube behind the epiglottis. Light being thrown inside, I was delighted with my first direct view of the vocal cords as well as of all the rings of the trachea as far as the bifurcation. Frequently repeated trials with a short, thick tube under the same conditions showed that the method was not easily accomplished, and in many cases failed entirely. But, in one series of cases the results were so brilliant that I was able positively to announce my discovery in a short preliminary communication which I then called "direct laryngoscopy," but for which I now propose the name of "autoscopy (a personal view, in contradistinction to a reflection in a mirror) of the larynx." Since that first communication,\* the technique of the operation has been very much simplified, and I can to-day speak of a definite method of examining the larynx with the naked eye, with no desire to anticipate any improvement that the future may bring. No longer needing two instruments, I now lay aside the œsophagoscope entirely and proceed as follows:

The pharynx and dorsal surface of the epiglottis are cocainized with a twenty per cent. solution. The patient lays aside any tight articles of clothing from the upper part of the body, and artificial teeth if they are present. He is

\* Kirstein, "Laryngoscopia directa and Tracheoscopia directa (Besichtigung des Kehlkopfes und der Luftröhre ohne Spiegel)," *Allgem. med. Central-Zeitung*, 1895, No. 34.

then placed in a horizontal position upon the table so that his head hangs down over the end, or he may sit erect upon a chair and throw his head strongly backward upon his neck. The autoscope \* consists of a short, thick tube, a portion of which is cut away, leaving a half-cylinder projecting at one end, to which a Casper's electroscope is firmly screwed at right angles. This instrument is introduced into the open mouth, the tongue being drawn well forward. The electric contact is immediately made, so that even the introduction of the instrument may proceed under illumination. The electroscope serves as a handle which I grasp firmly in the left hand, with the free extremity connected with the light cable turned upward. With the semi-cylindrical end turned toward the convexity of the tongue, I slide the tube down along the posterior pharyngeal wall, if possible not allowing it to touch the pharynx, until it is on a level with the cartilages of Santorini. Forcible leverage is then exerted, by means of which the tongue is forced still further forward and the epiglottis raised up. This introduction of the instrument is an especial art that must be acquired, and I beg that my colleagues who may wish to make use of it will not allow themselves to become discouraged by lack of success in the beginning. If the instrument is properly placed, the patient will breathe through the tube and the expired air will condense on a glass held before it, which substantiates the claim that the physician must make the examination with the unaided eye. Those who cannot be deprived of their spectacles must be somewhat upon their guard, but they will succeed in the end.

The autoscope forms a lever of which the fulcrum is the middle teeth of the upper jaw. The pressure used is not sufficient to endanger teeth that are firmly fixed. If the teeth are gone and a space exists, so much the better, for then the pressure bears directly on the jaw itself. Teeth that are loose or painful upon pressure may be provisionally, a contra-indication; still I hope later to become

\* Zu beziehen bei W. A. Hirschmann, Johannistr. 14-15; Berlin.



master of this difficulty. In this method, as in esophagoscopy, care must be taken that the upper lip does not come between the tube and the teeth, in order that the teeth shall not cut into the lip and cause excruciating pain, for, with perfect technique, this operation should be painless.

Weightier than all positive and hypothetical explanations that I am able to give you will be the demonstration of the procedure upon a number of patients, which I shall now undertake. Before I do so allow me another word concerning the attitude of autoscopy toward the mirror method. I wish to declare most emphatically that in my estimation the old method—which in theory is more complicated, but in practice is easier, since it needs no cocaine, does not force the patient to disrobe, nor place him in an unusual position—will remain in power and will be the proper normal method, sufficient as heretofore in most cases. We do not see as well by any means with the mirror as with the autoscope, still, we see amply enough for our ordinary uses. Furthermore, laryngoscopy has the advantage of being less embarrassed by contraindications than autoscopy, from which we have to refrain with various classes of patients for diverse reasons, especially for purposes of simple examination. This is particularly true in private practice, where much discretion is frequently demanded. The new method will not and cannot drive the old one from its hard-earned, and well-deserved position, but, as I have already remarked in another place, it will widen the domain of our diagnostic and therapeutic power, as regards the upper air passages, in a very considerable degree. What will befall those endo-laryngeal operations which are practicable by either method, will be seen when my numerous associates, after experience and ripe discussion as to the better way, can put them in their proper places. In no case will any disadvantage be offered to the evolution of laryngology, because, by the side of the old known and verified way, a new path is opened.



## MATERIA MEDICA AND THERAPEUTICS OF THE EYE.

BY A. C. DOVE, M. D., NEW YORK.

**GLONOINE.**—Flashes, as of lightning. Sparks, mists, or black spots before the eyes. Sensation as of whirling; of confused vision. Objects dancing before the eyes. Dim sight with vertigo or floating. Eyes red, injected during headache. Staring wild look to eyes. Protrusion of the eyes. Eyes feel as if they are falling out. Supra-orbital neuralgia; pain usually commences at 6 A. M., and continues until 11 or 12.

*Clinical.*—It is used for neuralgic pains in the eyes; and in retinal congestion due to exposure to bright light. Bad effects from the sun, also from fear and mental excitement.

**GRAPHITES.**—Photophobia. Great sensitiveness of the eyes to daylight. Intolerance of light, with redness of the eyes and lachrymation. Eyes red. Muco-purulent discharge, thin, excoriating. Pains sticking, burning, or itching. Letters appear double when writing; run together. Sees fiery zigzags around periphery of field of vision, in evening, with eyes open. Flickering before the eyes. Sees as through a mist. During menstruation, sight vanishes; blackness before the eyes. Smarting in the eyes, with heat.

*Clinical.*—It has cured ulcers of the cornea accompanied by more or less photophobia, redness, and lachrymation; also pustular keratitis; in fact, it is a good remedy in almost any form of scrofulous affection of the cornea accompanied by other signs of the diathesis, such as crusts on edge of eyelids, cracked canthi, moist, eczematous eruptions on the face and behind the ears.

In chronic ciliary blepharitis it is a good remedy.

I have repeatedly prescribed it with success on the above indications in these different forms of eye troubles.

HAMAMELIS.—Eyes feel weak.

Hammering over the left eye as if he would go out of his mind.

Feeling as if both of the eyes would be forced out of the head, relieved by pressing them with the fingers, but worse in a few moments afterward.

Sore pain in the eyes; eyes painful under slight pressure. Excessive congestion of the conjunctiva.

*Clinical.*—It is a useful remedy in traumatic troubles of the eye in which there is ecchymosis or congestion of the conjunctiva; also in traumatic iritis and keratitis with blood in the anterior chamber (hypæmia).

Inflammation of eyes from being on the water, “black eye,” from bruises.

HELLEBORUS.—Alternate contraction and dilatation of the pupil; tremor of the iris, lids sticky, dry, and sensation as if they were pressed down.

HEPAR SULPH.—Photophobia; objects appear to be red. Objects look too large.

Pain in the eyes as if pulled back into the head (crot. tig., paris quad.) Sight becomes dim on reading.

Boring pain in the upper bones of the orbits (asafœt., aur. met.) Eyeball sore to the touch.

Pressure in the eyes as from sand (calc. c., caust., sep., sulph.) Redness and inflammation of the upper lid with swelling, painful to touch.

*Clinical.*—This is the remedy that is indicated more often than any other in all inflammatory diseases of the eye with tendency to suppuration, or when the products of suppuration are already present.

It is indicated in all suppurative conditions accompanied by excessive tenderness to touch, marked photophobia, and lachrymation. Eyelids are swollen and inflamed; sometimes œdematous; bleed on forcing them open; general relief of symptoms by warmth. I have seen it cure nearly

all the different forms of ulcerative keratitis, especially when accompanied by pus in the anterior chamber (hypopyon).

It is useful in scrofulous inflammation of the eyes, especially in phlegmatic, fat, large-bellied children, with fine white skin, light hair, thick neck, and swollen glands; subject to eruptions and ulcerations of the skin.

In dacryocystitis and orbital cellulitis I have used it with curative effect.

In panophthalmitis it is the remedy in the suppurative stage, when the eyeball and lids are very much swollen, œdematous, and sore to touch. In fact, in all diseases of the eye in which there is an already established or impending suppuration, accompanied by exquisite sensitiveness to touch; also sensitiveness to the open air with chilliness, and relief from warmth or wrapping up warm.

HYDRASTIS.—Profuse secretion of tears; smarting of the eyes; burning of the eyes and lids.

Mucous membrane of eyelids much congested; profuse white mucous discharge.

*Clinical.*—It is indicated in catarrhal conditions of the eye in which the discharge is tenacious and ropy.

HYOSCYAMUS.—Illusions; objects look red as fire, eyes look wild, red, and sparkling.

Small objects look large.

Dimness of vision as though a veil were before the eyes.

Eyes open; distorted, rolling about in orbits, squinting, spasmodic action of the internal rectus.

Spasmodic closing of the lids; inability to keep them open.

Pupils dilated; insensible to light. (?)

*Clinical.*—In affections of the eyes of nervous origin, as in mania, convulsions, and hysteria.

It has relieved the excessive photophobia of scrofulous ophthalmia.

HYPERICUM.—Aching tension and weariness in the eyes. Sticking pain through the right eye. Tearing in the right eye in the evening. Lids agglutinated and tense.



*Clinical*.—Pain and irritation of the eyes from anterior synechiæ.

Stye on left lower lid.

IGNATIA.—Flickering, zigzag, and serpentine white flickering at one side of the field of vision. Pressive headache in the right side of forehead, extending down into the right eye: feels as if the eyeball would be pressed out, burning in the eyes and increased lachrymation.

Convulsive movement of the eyes and lids. Intense pain over the right eye, through supraorbital foramen, as if needles were pushed into brain.

Stabbing pain in the eyes, going to occiput and nape of neck, relieved by warmth, aggravated by sound.

*Clinical*.—It has cured cases of hyperæsthesia of the retina accompanying hysteria, in which there was intense photophobia and ciliary neuralgia. It has also been used with success in asthenopia and amblyopia in females, due to onanism; in hysterical subjects with morbid nictation associated with spasmodic action of various muscles of the face. In ciliary neuralgia with severe pain extending from the eye to top of head, producing nausea, often alternating with swelling in throat, the action of the drug has proved beneficial. It is especially indicated in hysterical subjects; in affections from suppressed grief and the excessive shedding of tears.

IODIUM.—Constant tearing pain around right eye, passing backward from inner canthus to the articulations of jaw.

Smarting in the eyes, pain as from excoriation. Protusion of the eyeballs, or a feeling of protrusion. Staring with wide open eyes; lids seem to be retracted.

Twitching of the lower lids. Trembling of the lids.

*Clinical*.—It has proven itself of value in syphilitic iritis.

I have found it curative in some cases of dacryocystitis, accompanied by a thick mucous discharge.

IPECACUANHA.—Optical illusions in bright colors. Blue and red halo around a light.



Worse from light, especially of a candle. Hardened mucus in external canthi.

*Clinical.*—I have used it in phlyctenular keratitis, especially in children, where there is great photophobia, some lachrymation, and more or less redness; it has seldom failed to relieve in these cases.

IRIS VERS.—Redness of the conjunctiva as from cold; eyes feel dull, with neuralgic pains, burning in inner canthus, with effusion of tears.

*Clinical.*—It has been found curative in chronic inflammation of eyelids.

JABORANDI.—Dim vision, twitching of the lids and pain in the eyeballs < by using them. Eyes tire quickly on reading; nausea. Everything becomes black before the eyes; aching of the eyes on reading, spots before vision. Vision becomes hazy; unable to use eyes for near work. Sharp pain through eyes into head. Headache on using the eyes; smarting and pain in the eyeballs, and aching over them.

*Clinical.*—It is especially useful in asthenopia where there is a blurring of the vision due to spasm or irritability of the ciliary muscle. It will relieve spasm of the accommodation which has caused apparent myopia. It relieves the pains of the eye due to weakness of the internal rectus. Periodic convergent squint has been benefited by its use in my hands.

KALI BICH.—Various colors and bright sparks before the eyes. Photophobia, with jerking of the lids; lachrymation and burning in the eyes.

Itching, with burning lachrymation and photophobia < evening and at night, with pain as from sand in the eyes.

Redness of the margin of the lids; agglutination in the morning. Burning in the margin of lids, white granular elevations surrounded by redness, on left conjunctiva, toward inner canthus.

Pustules on the left cornea with surrounding indolent inflammation and with pricking pain.

Conjunctiva red, traversed by large vessels; or chemosis with small spots of ecchymosis; stringy, yellow discharge from the eyes.

*Clinical.*—It has been found to be curative in ulcers or pustules of cornea or conjunctiva with very few subjective or objective symptoms, also in ulcers of the cornea with slight photophobia in the morning and agglutination; smarting, worse from rubbing.

In cases of croupous conjunctivitis where there is a false membrane; stringy discharge; conjunctiva inflamed and chemosed.

I have found it one of the best remedies for descemetitis: fine punctated opacities on posterior surface of cornea; moderate redness of eye.

It is reported as having cured granular conjunctivitis, especially where there are large granulations, accompanied by stringy discharge.

In ulcers of the cornea in which there is no special indication for any remedy, this is a good one to give.

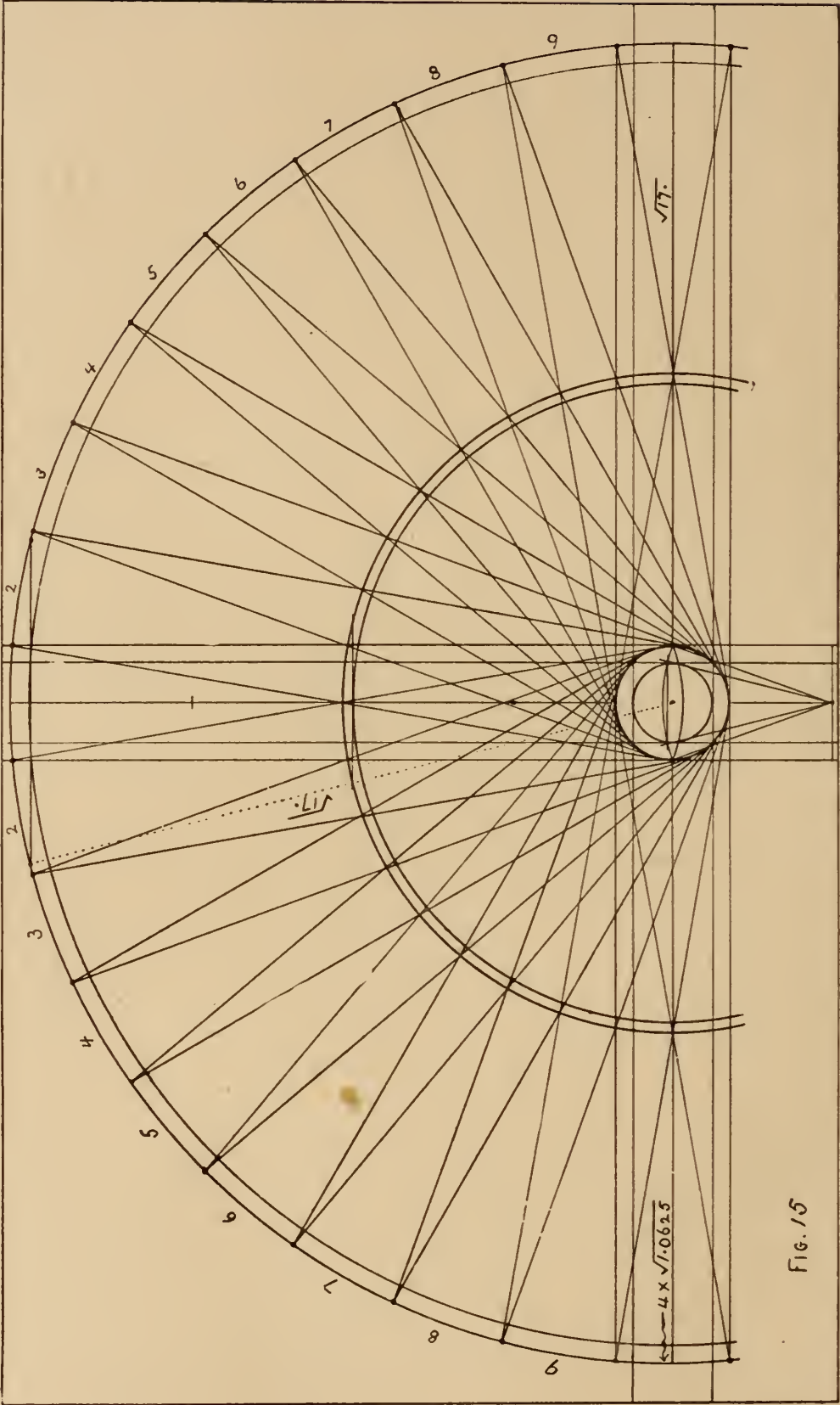
## A STUDY IN LIGHT AND REFRACTION—VI.

BY W. U. REYNOLDS, M. D., O. ET. A. CH., NEW YORK.

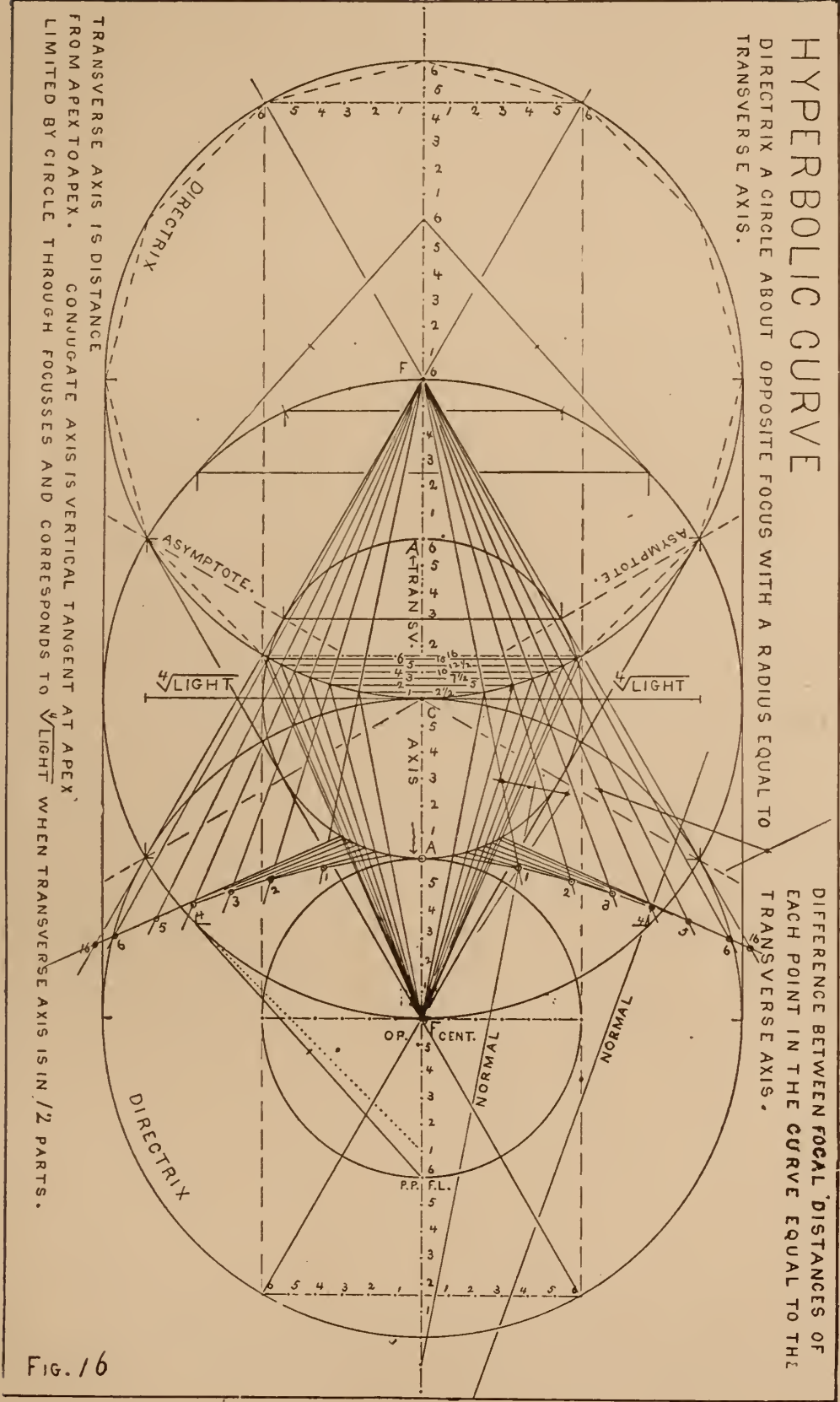
THE division of the circle into degrees appears to be related to the width of the lens and the same source of origin, for, making a circle with a radius of the hypotenuse of a right-angled triangle, whose long side is four foci and short side one focus, making the hypotenuse equal to  $\sqrt{17}$ , the width of the lens is found to be contained in the circle thirty-six times, or eighteen times in the half circle. Each of these divided into ten parts give the 360 degrees. The nine of the quarter circle give the seven colored, the one chemical, and one heat rays of the spectrum.

Fig. 15 is an attempt to place this in diagram. The number of divisions equals, for a circle  $(2 \times R^2) + 2$ , or  $(2 \times \text{secant}) + 2 = \text{the periphery}$ . For a semicircle  $R^2 + 1$  or  $\text{secant} + 1$ , giving the axis and half the axis of a parabola plus two units and one unit as the measure of the periphery of the circle. The axis extending between foot of parabolic tangent and foot of its normal. In the lens the comparative size of image and length of focus for each distance of object plus one equals the size and distance of object expressed in units of the length of principal focus. Between the preceding formulas for periphery and object distance there is then a difference of two on the semicircle and four on the circle. Also there are two geometrical units involved, one in the radius and one in the periphery.

An illustration of the hyperbolic curve is attempted in Fig. 16. The points on the curve are represented as the







centers of very small circles and are numbered to correspond with the ordinates in the directrix. The curve is very obtuse, but would be acute were apices near the foci, say one-sixteenth of a lens focus. As it is, the difference between the distances of a point is equal to two lens principal foci, when perhaps it should be four minus half the thickness of the lens. However, as it is, there are some leading points. Thus the total distance covered is eight lens foci. The optical center and end of ray correspond to four foci. From one hyperbolic focus to lens posterior principal focus is five lens foci, and to the point where image equals object is six lens foci.

The square of the asymptote, or line whose prolongation is continually approaching the curve, is greater than the square of the transverse axis by  $\sqrt[4]{\text{LIGHT}}$ , making the conjugate axis.

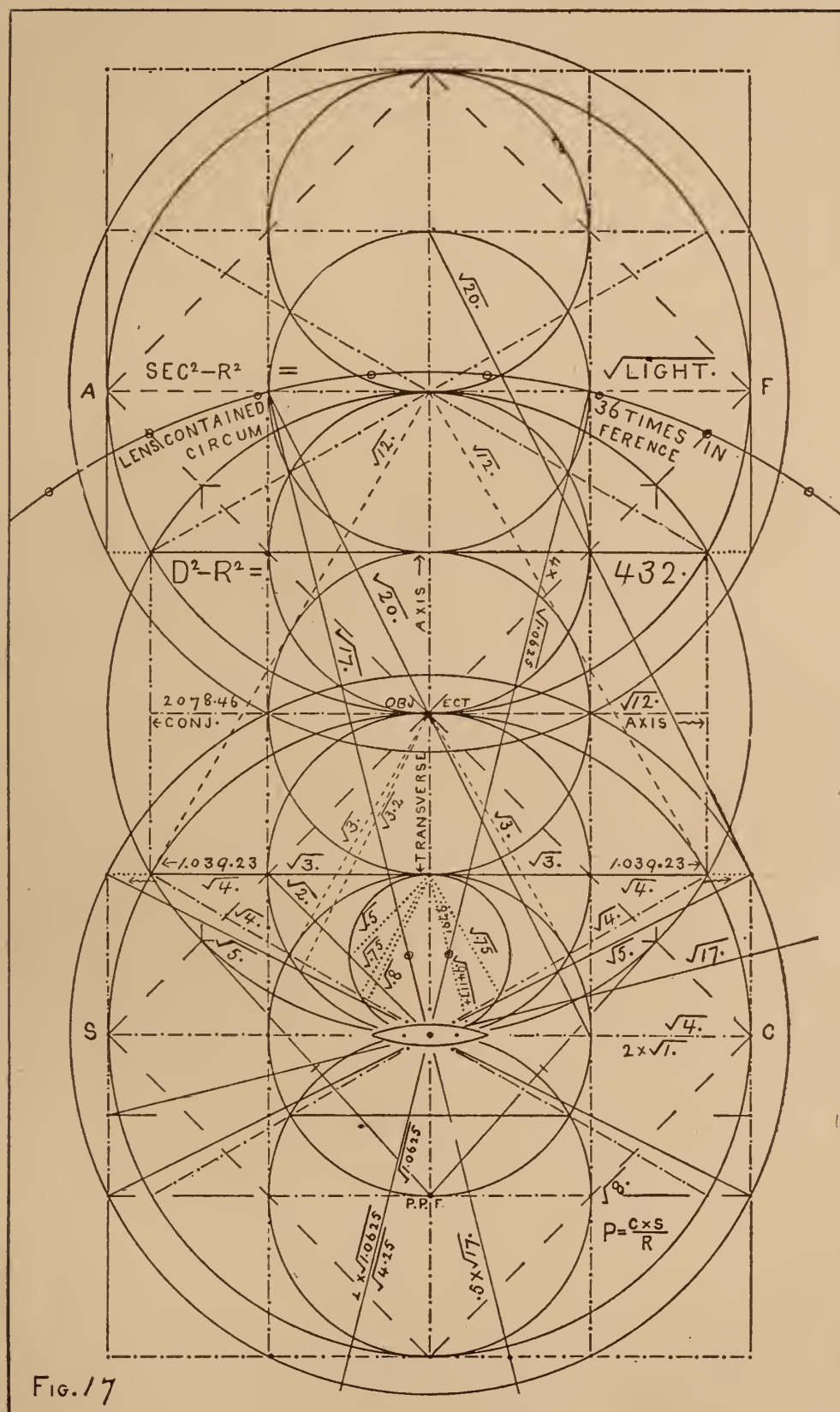
The lines from the corners of the square contained in the circle through the foci, to the lens posterior principal focus, equal the diameter of lens curve.

The method used in locating the curve is seen. Each point is on a prolonged radius of the directrix. A line from the intersection of this radius with the directrix to the other focus will be bisected by the circle through the apices. A line perpendicular at the point of bisection will intersect the prolonged radius of the directrix on the hyperbolic curve. The bisected line is thus the base of an isosceles triangle whose apex is in the curve and whose sides are the distances of the point from the nearest hyperbolic focus and the nearest point in the circular directrix whose center is the more distant hyperbolic focus.

The "normal" bisects the angle formed by the focal distances. An "ordinate" would be a perpendicular to the axis. In this figure the ordinate of point 6 intersects axis about the center of a lens foci.

How the movement of the point of perfect image is to be made toward the lens as the object is removed from it, is not very evident from these curves.

The diagram, however, may prove useful in some respects.



In Fig. 17 an attempt has been made to assemble the various values and principles. They all seem to be contained within the three intersecting circles.

The different lengths, as lines, of  $\sqrt{1}$ , are noticeable, showing a peculiar change in the length of the unit.

On the circle containing the width or diameter of the lens 36 times, five lens widths are intercepted by the diagonals of the square whose center is center of diagram and sides form lens foci.

The line P is shown in different values according to its radius and angle. As the angle runs from zero to  $180^\circ$  the intersection of P with the radius describes a semicircle.

Since the action of a lens is on the same lines behind as in front, the object and image being interchangeable, that is, the same calculation applied to picture and focus will give the distance of object and its size, and as one increases as the other decreases yet the lens remains of same width, it follows that any arrangement of geometrical lines not showing this change and reciprocity cannot express the action of a lens, however close coincidences there may be in its arithmetical formation to isolated positions of the object, lens, and picture.

Perhaps the hyperbolic curve would show more if differently arranged, say the optical center placed at the "center of curve," that is midway between the foci.

In the experiments with intermittent flashes of light, the length of time it takes the brain to appreciate an impression upon the retina and the length of time the impression remains, must be a factor, and if these correspond with the lens, then the nerve action must be in accordance with the principles of a circle, and they are a principle of nature in that respect at least. In fact, an article on the optic nerve and its connections in the brain, in a recent issue, showed the arrangement of a circle in the brain.

Our calculations have not extended yet into the reflections and other actions which may occur within the two reflecting surfaces of a lens, based upon the peculiar qualities of circles and the law of reflection that the angle of



incidence is equal to the angle of reflection, and that, perhaps, only that light enters the lens that is in line with a perpendicular or only varying in a slight degree from that, or that the perpendicular can have a certain definite diameter, and none can leave the lens except on a radius of curve of posterior surface.

This opens up a new field for investigation, and on constructing a diagram of a lens upon the lines already found, and carrying a line through the anterior surface on a radius of a curve to the posterior surface, it is not here found to coincide with the perpendicular. Reflecting it to the anterior surface it is not then coincident, reflecting it back again to the posterior it does not coincide. It is found that the lines tried are reflected back and forth toward the opposite side of the principal axis until after striking the anterior surface three times they are turned again toward the place of first entry, making again the same number of reflections, six on each surface altogether. After reaching the location of first entry, if not coincident with a perpendicular, the reflections carry them back again in the direction first taken. The return is begun a distance on the other side of principal axis corresponding to the point of entrance.

Does this property of the lens have anything to do with the seven images of a minute object? An object small enough and distance great enough to keep the reflections from overlapping.

The overlapping of images in ametropic eyes is already utilized in testing by colored lines on a colored background. A green background and red lines of different widths. According to the shade of red and green, white, yellow, blue, or indigo are seen.

## MATERIA MEDICA OF THE NOSE AND THROAT.

BY A. WORRALL PALMER, M. D., NEW YORK.

### IGNATIA.

This drug is especially indicated in scrofulous and nervous, or hysterical individuals. The great majority of symptoms are subjective. \*In nares is a chronic catarrh of frontal and ethmoidal sinuses with great distress in frontal eminence; \*loss of smell, oversensitiveness to odors or perversion of olfaction (imagines odd odors). In the pharynx is the keynote of this drug, to wit, *the pain and sticking in throat between the acts of deglutition* and entirely disappearing during them, which almost invariably occurs in every malady in which it is curative; \**globus hystericus*. \*Hypertrophy of the tonsils, especially the right, cervical glands implicated, in neurotic subjects sometimes accompanied by scrofulous pharyngitis; \*acute stage, small superficial yellowish-white ulcers on tonsils. \*Chorea of the velum palati (Agar.; Cupr.; Hyos.); \*hyperæsthesia, paresthesia and neuralgia of the pharynx. In the larynx and trachea we find \*chronic catarrhal congestion consequent upon hysterical or clonic spasms of the laryngeal muscles; \*functional or hysterical aphonia accompanied by anxiety and spinal symptoms in nervous hysterical individuals; \*stammering or chorea of the larynx, etc. (Cupr.; Hyos.); \*spasm of the larynx due to hysteria, excitement, or reprimanding. Cases of diphtheria have been reported cured by this drug, which had sensation of a plug in the throat with constant desire to swallow and stitches from the throat to the ear (Apis.; Hepar s.; Nitr. ac.).

## IODUM.

**Nares.**—(*Objective*).—\*Phlegmonous rhinitis when fully established ; \*lupus ; \*scrofulus rhinitis.

(*Discharge*).—Blowing of much yellow mucus (Puls.); stopped coryza, < in evening becoming fluent in open air, with profuse expectoration (Cepa ; = the opposite, < in warm room and > in fresh air) ; fluent watery coryza, sometimes with much sneezing ; sudden violent coryza with lachrymation, pain in eyes, then violent cough and nausea, *difficult, almost wheezing respiration*, feeling as if larynx were constricted externally ; \*acute coryza, discharge hot, making nose sore, frontal headache with sneezing and fever. (Ars.) \*In chronic catarrh, yellow fetid discharge, nose painful and swollen (Aur. mur.; Natr. mur.). \*Acute purulent malignant rhinitis.

**Naso-pharynx and Pharynx.**—(*Objective*).—\* Pharyngitis suppurativa ; \*gangrenous or putrid sore throat ; \*acute inflammation of the tonsils, with hoarse cough and deafness, the eustachian tube seems to be especially involved ; \*mercurial or syphilitic ulceration of the mouth or throat with swollen glands, < by warmth. (Hepar. sulf.—mercurial ulcerations, Kali iod. and merc. sulf.—syphilitic ulcerations) ; \*mumps ; \*hard tonsillar hypertrophy < in left side, associated with thickening of pharyngeal mucosa (Baryta iod.; Spong.) ; \*similar hypertrophy of the supernumerary or lingual tonsils ; \*lymphatics hardened, torpid and hypertrophied in scrofulous pharyngitis and with ulcers having spongy edges and discharging ichorous and bloody purulent matter.

(*Subjective*).—Deglutition difficult.

**Larynx and Trachea.**—(*Objective*).—\*Follicular enlargements, possibly ulcerations ; \*inflammatory swelling, etc., below the cords ; \*chronic catarrhal thickening of the laryngeal mucosa ; \*lupus, complicated with syphilis ; \*chronic tubercular thickening in ary-epiglottic and interarytenoid folds ; \*tubercular ulceration in larynx, with tightness and soreness in one spot in larynx and muco-

purulent or bloody expectoration ; \*phthisis, complicated with scrofula ; \*adenoma ; \*ulcerations following pertussis ; \*for goiter, see concomitants.

(*Subjective*).—Pain in larynx with desire to cough ; frequent pain in laryngeal region and sublingual glands with stitches ; smarting in region of trachea with frequent lacerations ; \*hoarseness and soreness or aching or all combined ; \*respiration difficult, especially inspiration (Chlor. = expiratory dyspnœa especially) ; \*wheezing, sawing respiration in croup ; also pain in larynx with grasping at the same ; \*deep, hoarse, and gruff voice in croup ; \*acute spasms of the larynx in persons having rickets, scrofula, or indurations of the tonsils, cervical, thymus, and bronchial glands ; \*tightness and constriction about the larynx and trachea ; \*one spot in larynx is painful to pressure with spasmodic cough followed by expulsion of scanty, sticky, lumpy mucus.

(*Discharge*).—\*Muco-purulent or bloody expectoration in phthisis laryngis.

(*Cough*).—\*CROUP ; \*croupous inflammation of larynx and trachea, with hard, dry, barking cough, fever and difficult breathing,—later the cough is muffled, indistinct, with intense dyspnœa and torpor from membranous obstruction. (Acon. = dry cough and fever accompanied with *great* anxiety. Brom. = when fever disappears and patient perspires freely) ; \*pertussis with emaciation and an enormous appetite ; \*cough caused by long continued damp weather (Dulc. = dry, hoarse, but usually copious tough greenish expectoration caused by tickling in larynx < by cold, damp weather) ; \*acute or chronic laryngeal catarrh, with dry, croupy cough, sawing respiration, larynx sore to touch, soreness in upper part of chest, accompanied by watery excoriating nasal discharge (Cepa).

**Characteristics and Concomitants.**—Adapted to persons of scrofulous diathesis and those suffering from mal-assimilation or mercurialization.

Sad and melancholy ; excessive nervous irritation with constant inclination to move about ; illusionary feeling.



Sensation of band drawn tightly around the head.

Objects looked at appear to move before the eyes.

Eustachian catarrh.

Breath malodorous ; salt, sour, or sweet taste on tongue.

\*Face pale and cold in croup ; usually sallow ; itching of facial muscles.

\*In goiter it is the most frequently curative remedy administered internally ; but upon external application of the same alarming pulmonary symptoms often follow the diminution of the swelling (= T. F. Allen) ; \*parotiditis.

Appetite good ; < of symptoms after eating ; sour eructations.

Incarcerated flatulence ; distention of abdomen.

Leucorrhea thick, yellow, corroding, eats holes in linen.

Constrictive sensation in chest ; \*pneumonia, especially of apex ; atrophy of mammæ.

Great debility.

#### IPECACUANHA.

Ipecacuanha is of most use in hemorrhagic difficulties of nose and pharynx, spasms of the larynx and pertussis.

\*Acute coryza and catarrh accompanied by nasal hemorrhage and bronchial catarrh ; epistaxis of bright red blood, especially if such occur during eruptive fevers or pertussis, or accompany purpura hemorrhagica or hematophilia (Bell. ; Millif. = bright blood. Croc. = dark).

In the pharynx is hemorrhage with injection of its mucosa and that of the velum palati or many hemorrhagic spots on the same, accompanied by soreness of the pharynx. In spasmus glottidis and pertussis is \*dry tickling in upper larynx causing cough ; \*violent spasmodic cough threatening suffocation caused by feeling as of sulphur fumes, causing vomiting without nausea, suffusion of face, and child becomes rigid (Coral. rub. ; Cupr., Kalic.) ; \*pertussis with epistaxis, hematemesis and ecchymosis of the conjunctiva. In bronchial catarrh it is a great favorite ; but that is beyond the scope of this article.

## KALI BICHROMICUM.

**Nares.**—(*Objective*).—Septum dotted with minute ulcerations; *large ulcerations in upper part of triangular cartilages of septum* and purulent inflammation of whole mucosa (Aur. met. and mur.; Kali iod.; Nitr. ac.; Thuja); \*atrophic catarrh with frontal sinusitis; \*glanders; \*pseudomembranous rhinitis (Iod.; Kali perm.); \*syphilitic ulceration of mucous membrane only or caries of bones, with pain across bridge of nose and discharge of plugs of yellow, stringy, sticky mucus; \*lupus; \*scrofula of nares; \*diphtheria, with grayish-yellow exudation (Lac. can.; Merc. cyan., and prot.; Mur. ac.; Nitr. ac.).

(*Subjective*).—Shooting from root along left orbital ridge (Cinnab.; Hepar. s. c.; Sulf.); sticking on right side on blowing, with post-nasal discharge of offensive greenish masses of disagreeable taste, then nostril filled with hard masses and ulcers on external borders of nostrils; burrowing inside root of nose (probable ethmoid bone), with beating, externally heat and throbbing, root of nose swollen, obstruction of nares with unsuccessful efforts to clear it; heaviness; *pain in nasal bones and septum* (Kali iod.); soreness with yellow scabs on septum; \*in atrophic catarrh, *dryness with pain in root*, as in stopped catarrh, extending to temples and affecting the head with swollen sensation, walls feel stiff and velvety (latent empyema of frontal sinuses. Kali iod.; Sil.); dryness, soreness, and burning in right nostril to frontal sinuses; \*pressure at root of nose, with dull frontal headache, < by pressure upon bridge of nose, occasional violent pains extending to cheek bone and eyes; great soreness of ulcers.

(*Discharge*).—Plugs; always full of thick mucus; mostly in eve. (Puls.), scanty, acrid, causing burning on septum (All. cep.; Nux v.; Sil.; Squil., with burning = Natr. mur., during menses = Am. c.); \*coryza, with tough, stringy discharge, causing choking, and with small scurfs, which, when detached, leave ulcers, accompanied by intolerance of light; \*atrophic catarrh, with thick, offensive, lumpy,

ropy, dark green, often blood-stained discharge from nose and throat, pharynx glazed and atrophic; \*the characteristic and omnipresent symptom is its *tenaceous, stringy discharge, either thick or thin*, usually yellow or gray, often blood-streaked, only exception where curative without this tenacity is in ulceration of the nares, ulcers covered with adherent yellow scabs with excoriating exudation.

(*Olfaction*).—Imagines a putrid smell with eructations and taste of rancid bacon.

**Naso-pharynx and Pharynx.** —(*Objective*).—*An excavated sore on right side of uvula, with reddish areola containing yellow tenaceous matter*; ulcers on tonsils and throat (Ail.; Lyco.), surface covered with ashy slough and surrounding mucosa dark, livid, and swollen; redness, swelling, and pain in tonsils preceding ulceration; \*chronic inflammation of pharynx, which is dark and glossy, or copper colored; \*acute catarrh, with red or pale relaxed mucosa; \*chronic catarrh, redness of vault with dry sensation, moderate secretion, especially in scrofulous constitutions; \*tonsils and mucous membrane hypertrophied; \*follicular pharyngitis, with characteristic discharge or expectoration of small pellets and dry, irritable state of pharynx; \*pharyngitis atrophica, mucosa coppery, palate relaxed, uvula œdematous, indolent, shallow, grayish ulcers, tonsils red, swollen, or ulcerated, dryness and soreness of posterior surface of soft palate, mucous râles in eustachian tube; \*acute membranous pharyngitis with œdema of uvula; \*in diphtheria, œdema of uvula, uncovered mucous membrane purple, pharynx, fauces, tonsils, and even hard palate covered with grayish-yellow exudate, deep ulceration of fauces and marked glandular involvement, but cellular infiltration slight and discharge fetid (for comparison see Nares); \*in syphilis, acquired or hereditary, fauces dark red or coppery, œdema of uvula, deep ulceration, with tendency to perforation of soft or hard palate, accompanied by nasal ulceration and discharge of hard green lumps of mucus from posterior nares (Kali iod.); \*œdema and ulceration of uvula.



(*Subjective*).—\*Stitches in left tonsil toward ear; feeling of adherent mucus in morning (Kali c.; Puls.); sensation of hair in fauces (Ars.; Coccus c.); dryness, especially in morning on waking, with dysphagia; \*fullness, rawness, and burning; \*in chronic catarrh, constricted sensation, fullness and pain on ingesting hot or cold drinks, or food.

(*Discharge*).—*Hawking and much tenacious, gelatinous mucus in morning*; \*tough, salty-tasting mucus dropping from posterior nares, so thick, stringy, or viscid, that it is difficult to remove it from throat; \*in syphilis, hard green lumps from posterior nares accompanying ulceration; \*chronic catarrh of rhino-pharynx and pharynx, sometimes extending to œsophagus, with turgid mucosa and characteristic discharge; \*rhino-pharyngitis catarrhalis acuta.

**Larynx and Trachea.**—(*Objective*).—\*Ulceration and necrosis of laryngeal cartilages following pertussis; \*in chronic catarrh, veins varicosed, ary-epiglottic folds, vocal cords and mucous membrane on posterior wall dark, red, and puffy, and partly covered with grayish mucus, shreds of which stretch across larynx; \*lupus, complicated with syphilis; \*croup, primary or secondary, pseudo-membranous exudate, with tendency to involvement of trachea and bronchia (Kaolin), tenacious expectoration and peculiar metallic crowing.

(*Subjective*).—Ulcerative pain; pressure in larynx < by talking, with aphonia; tickling extending to mouth and ears, causing cough and clearing of throat, especially occurring after dinner; \**hoarseness and rough hollow voice and dryness*; hoarseness in morning, < till noon, < by eating, with hawking of thick bronchial mucus and occasional scraping in larynx; hoarseness in morning on waking < till eve., with pressure and scraping in larynx; \*in croup, hoarseness < by expectoration of thick, tenacious, yellowish-white mucus, moderate dyspnœa and metallic crowing; dyspnœa in sleep (Ars. = dyspnœa without tenacious expectoration, Ambra gris.).

(*Discharge*).—Hard, dry, hacking, thin expectoration of gray mucus like white of egg; *expectoration of tough mucus*,



*so viscid that it drew in strings to feet* ; \*subacute catarrh of larynx without fever, but very tenacious expectoration ; \*catarrh in syphilitic patients.

(*Cough*).—When exercising ; *after meals* ; short, dry c. from tickling in larynx ; dry hacking in evening, with hoarseness and stitches in chest ; with burning in bronchi ; with white expectoration as tough as pitch, could be drawn out in strings (*Coccus c.* ; *Lactic ac.*) ; or with yellowish-green mucus, sometimes tinged with blood ; from tickling in throat with copious expectoration of thick lumps of bluish-white mucus ; paroxysms of c. from tickling at bifurcation of trachea with reddish expectoration ; short interrupted c. in morning, loosening lumps of tenacious mucus and causing sensitiveness of larynx ; “stuffing” c. with pain, soreness or weight in chest and yellowish, heavy, tough expectoration ; from “stuffing at epigastrium in morning, followed by expectoration and lightness in head ; c. in acute and chronic laryngitis and croup, although not dry, is barking in character with tenacious expectoration, causing gagging < by warmth, sometimes > by lying down, and < by eating.

**Characteristics and Concomitants.** — Syphilitic or sycotic dyscrasia ; fat, light-haired persons ; those suffering from vapors of arsenic.

Low spirited, languid, and listless.

\*Dull, heavy, frontal headache ; pressure at root of nose, < by pressure upon bridge of nose.

Objects appear yellow ; lids œdematous ; discharge tenacious ; \*intolerance of light accompanying coryza.

\*Crackling in eustachian tube and ears with pharyngitis atrophica ; pulsating pain in the ears at night ; stitches from ear to mouth, principally in left side.

Thick yellow coating on tongue ; accumulation of thick, tough, stringy saliva ; breath malodorous ; sensation of hair on back of tongue ; coppery, sweetish, or sour taste.

Face bloated ; maxillary bones sore, as if bruised.

Nausea, vomiting of sour, indigested food, of purulent mucus, or bile, or pinkish glairy fluid.

Either habitual constipation or diarrhea, watery, mucous, or bloody.

Itching of genitals; very tenacious yellow leucorrhœa. Stitches in chest, especially left.

Pains migrate like Puls.; rheumatism co-existing or alternating with gastric or pulmonary troubles.

Awakes at 2 A. M.

General < in summer; < in afternoon.

#### KALI CARBONICA.

**Nares.**—(*Objective*).—Thick and red. Scurfy.

(*Subjective*).—Ulcerative pain in right nostril. \*Burning, stinging pains. (*Aur. met.* = burning, itching, stinging, smarting.) Stopped catarrh.

(*Discharge*).—\*Fluent, acrid coryza, excoriating anterior nares with excessive sneezing. (*All. cep., hydras., kali iod., and nitr. ac.*) \*Catarrh with obstruction, fetid discharge, burning, nostrils sore and crusty.

\*Dry catarrh with more or less cough and loss of voice.

(*Epistaxis*).—Recurring on washing face or about 9 A. M. (carbo veg.).

**Naso-Pharynx and Pharynx.**—(*Subjective*).—*Sticking in pharynx as from a fish bone* if becomes cold (*nitr. ac., hepar s. c.*). Sensation of a plug, which is loosened by coughing. (*Merc. bin. and prot.*) Scraping with dryness and roughness (*bell., hyos., merc. s., natr. ars., rumex cr., thuja*). Roughness with cough.

Crawling sensation in morning and evening, provoking hawking and coughing.

(*Discharge*).—Chronic rhino-pharyngeal catarrh in anæmic persons, tenacious mucus in back of throat in morning, which can neither be completely swallowed nor hawked up. (*Hydras. mur.*) \*Acute pharyngeal catarrh with constant desire to clear throat, sharp sticking pains < by cold (*hepar s. c.*).

**Larynx and Trachea.**—(*Subjective*).—Easy choking when eating. Raw pain in larynx. Dyspnœa awakes at

night. \*Asthma recurring every morning about 3 or 4 A. M.; especially < by sudden cold changes.

\*Subacute or chronic catarrh, sometimes with dyspnœa, cough generally dry, or expectoration very scanty, regular < at 3 A. M., at times paroxysmal or suffocative.

(*Discharge*).—\**Expectoration of small, round hard lumps of mucus (stan.)*, of sourish taste (*nux. v.*, *phos.* = sour, salt, or sweet, < in morning). \*Expectoration scanty, difficult to raise, adheres to mucous membrane or slips back when partially expectorated. Is less tenacious than the bichromate.

(*Cough*).—*At 3 A. M.* Repeated every half hour. (*Nux. v.* = < after midnight, mental exertion, eating, drinking etc.) Dry, tickling cough affecting chest (*phos.*). Suffocative cough at 3 A. M. as from dryness of larynx, with cramps in chest preventing speaking, redness of face, and general sweat (*bell.*, *ipéc.*, *spong.*). \*Dry, racking cough with sharp, cutting, sticking pains in chest and hypochondria. \*Pertussis with < at 3 or 4 A. M. \*Laryngeal and tracheal catarrh, with short dry cough < by eating or drinking, with fever, thirst, and loss of appetite. \*Dry cough with backache, sweats, and emaciation or other symptoms of phthisis. \*Dry cough as sequela of abortion or accouchement.

**Characteristics and Concomitants.**—Aged persons of lax fiber, fat, flabby, loss of vitality; starts or afrighted easily.

Pressure on forehead with photophobia; hair dry; scalp itches and burns.

Burning in eyes; bag-like œdema under eyes, \*in chronic pharyngeal catarrh stitches behind eyes.

Singing, whizzing, and roaring in ears.

Numbness of mouth as if burned; painful vesicles on tongue; the tip burns as if raw.

Pressure and stitches in stomach; *emptiness before and fullness after eating*.

Large, dry, difficult stools, or light, gray, soft stool.

\*Acrid leucorrhœa or metrorrhagia accompanying nasopharyngeal catarrh.

Stitches through right lung to back; constriction in region of heart.

\*During laryngeal catarrh, burning heat and sleeplessness, also stitches in any part of body, especially chest, with ozæna, rheumatic and gouty pains; cold hands and feet; extremities go to sleep.

Sensation of emptiness in whole body.

*Aggravation at 3 A. M.*

#### KALI IODATUM.

Although in this article I am adhering exclusively to the indications for, and use of, drugs based upon the law of similars, in considering this one I must digress, because in material doses it is an *almost universal antidote to the poison or toxine of secondary or tertiary syphilis* in whatever locality or in whatever manner manifested. It has cured any lesion from mucous plaques to the severest ulceration. Usually administered in the saturated solution commencing with three or five drops, t. i. d., gradually increasing by one drop per dose per diem until improvement or symptoms of iodism is marked; then lessen the dose gradually for about ten days and again increase as directed above. Its homeopathic indications are:

**Nares.**—(*Objective*).—\*Phlegmonous rhinitis, first stage, septum much swollen and turgid, in syphilitic and scrofulous subjects (*hepar s., merc. s.*).

Nose feels congested with frequent and prolonged sneezing.

(*Subjective*).—\*Tight, full feeling and throbbing in nasal bones in coryza.

Tingling, prickling, or burning in upper part of nostril, violent paroxysms of sneezing, alternate occlusion of nostrils, heat in nasal sinuses, acrid discharge from anterior nares (*graph.* and *phyto.* = alternate occlusion. *All. c., ars., natr. mur., nux v., sil.*).

(*Discharge*).—\*Profuse watery coryza with redness of mucous membrane of the eyes, nose, palate, and throat, lachrymation, violent sneezing, irritation to cough, swelling



of upper lids, followed later by offensive, dark yellow, or green discharge, epistaxis, antrum of Highmore and frontal sinuses involved; tight, full, and throbbing feeling in nasal bones and sharp pain in ears (*sang.*, *merc. s.*). \*Ozæna, greenish-yellow excoriating discharge, after abuse of mercury, with throbbing and burning in nose and forehead, otorrhea and hypertrophy of submaxillary glands, especially indicated if of syphilitic origin.

(*Epistaxis*).—Violent bleeding.

(*Olfaction*).—Loss of smell.

**Naso-Pharynx and Pharynx.**—(*Objective*).—Syphilitic, thin excoriating discharge, œdema and great distortion of tissue. Gummata and deep ulceration. (*Merc. dulc.* = ulcerations superficial. *Nitr. ac.* = ulcers of irregular outline).

(*Subjective*).—Swallowing painful and difficult, with redness and swelling of soft palate and tonsils < on right (*apis*).

(*Discharge*).—Chronic catarrh; expectoration of stringy, salty, yellowish or greenish mucus, with burning, scraping roughness of throat (*merc. bin.* = same but tasteless).

**Larynx and Trachea.**—(*Objective*).—\*Acute laryngitis. \*In chronic laryngitis arytenoids purplish and follicular ulceration. \*Chronic thickening of mucosa. \*Acute œdema of larynx, either idiopathic, or sequela of pertussis or of syphilitic origin. \*Lupus complicated with syphilis. \*Syphilitic gummata, œdema, mucous plaques, and deep tertiary ulcerations, preferably in material doses.

(*Subjective*).—\*Chronic catarrh with contraction, heat and pain in larynx, intolerable tickling, causing dry teasing cough, morning hoarseness, voice inaudible above middle register, of especial service in syphilitic, scrofulous, or rheumatic diatheses. \*Asthma. Difficult respiration on waking at night, with loss of voice. Dyspnœa on ascending stairs with pain in cardiac region.

(*Cough*).—\*C., with expectoration like soap-suds. Dry c. mornings and evenings (*brom.*, *phos.*, *sulf.*, *tab.*). Short, dry hacking c., with soreness or rawness in throat.

**Characteristics and Concomitants.** — Particularly

adapted to persons of syphilitic, scrofulous, or rheumatic diathesis; also those suffering from glandular diseases and massive doses of mercury.

\*Violent pain in frontal region, with coryza and ozæna.

\*Swelling of lids. \*Lachrymation and conjunctivitis accompanying coryza, syphilitic iritis or irido-choroiditis.

\*Violent boring, darting, and sticking pain in ear. \*Otorrhœa with ozena.

Disagreeable taste in and odor from the mouth, bloody saliva, tongue receives impress of teeth: mucous plaques, specific ulceration, etc.

\*Submaxillary gland swollen with ozæna; \*thyroiditis, swelling, sensitiveness on pressure or even touch.

Leucorrhœa acrid, corrosive, malodorous, yellow or green.

Fine sharp stitches through chest, especially upper left side.

Stitches or constant dull pain in lumbar region; tearing, darting through all limbs.

Symptoms usually occur during rest and > on motion.

## ABSTRACTS FROM CURRENT LITERATURE.

### **Story—Fatal Case of Malignant Disease of the Middle Ear.**—*London Lancet*, April 27, 1895.

The patient, a man æt. thirty years, had polypus of the middle ear, with repeated recurrences after removal. Later, necrosis of part of the temporal bone presented, the patient dying of exhaustion within six months after the removal of the first polypus. Microscopic sections of the tumor of the ear, and of a secondary growth on the neck were examined by Professor Scott, who regarded them as sarcomatous. The patient died, not from perforation of the malignant growth into the cranial cavity, but from exhaustion, with difficulty in deglutition, which came on simultaneously with loss of speech.

DEADY.

### **Vossius.—The Operative Treatment of Myopia, with Remarks upon Cataract Operation.**—*Beitr. zur Augenh.*, No. xviii, 1895.

The author reports nine cases of extreme myopia treated by extraction, with very satisfactory results. In these cases, his first procedure was discission of the crystalline lens, which he repeats, if there is room, and, some weeks later performs linear extraction of the traumatic cataract, each time that it is not absorbed quickly enough. He does not make an iridectomy, and declares himself strongly in favor of the operative treatment of excessive myopia. He relates a case of traumatic subluxation of the crystalline, where it was finally extracted.

The author speaks of a modification which he practices in the simple extraction of senile cataract. After having dilated the pupil with atropine, to which cocaine has been added, he performs a keratotomy on the same border, making a conjunctival flap three to four mm. in height. Then he removes the crystalline, retaining the iris by means of a spatula. The conjunctival flap

quickly unites with the sclerotic, and, in the case of a secondary prolapse of the iris, he dispenses with excision.

Clinical and microscopical details are also given of a case of spontaneous resorption of a soft cataract, accompanied by iridocyclitis, where he proceeded to the extraction of the crystalline sac. This contained no crystalline fibers, but only masses of hyaline matter, fine crystals, swollen epithelium cells, and vesicular cellules of Wedl.

DEADY.

**Dogiel.—The Nerve Terminations in Lachrymal Glands of Mammals.**—*Archiv für Mikr. Anat.*, vol. 42.

The researches of Dogiel were carried on upon dogs and guinea pigs, the same methods of coloring being used as in the study of the nervous elements of the retina. The lachrymal gland receives, almost entirely, nerve fibers that are lacking in myelin. They surround the excretory channels and the blood vessels, accompanying them into the lobules of the gland, where they form a primary network. They proceed thence in fine ramifications, to form a new network at the base of the cells. Still finer ramifications penetrate the epithelium and there form an intercellular network. The free extremities which sometimes appear to the observer are due to incomplete coloration.

DEADY.

**Sulzer, D. E.—Optic Neuritis secondary to Ozena.**—*Annales d'Oculist.*, January, 1895.

Two cases of ozena are described in which papillitis and optic neuritis appeared as secondary manifestations. The treatment was iodide of potassium internally, with very careful washing, etc. As the condition of the nose improved the ocular troubles diminished and disappeared. This neuritis may have been caused by direct propagation of the infectious material by means of the vascular or lymph channels or remotely as seen in the post-diphtheritic paralysis following inoculation with Loeffler's bacillus. The author believes the first theory to be correct.

PEARSALL.

**Mackenzie, G. Hunter.—The Treatment of Ozena. A Preliminary Note.**—*Brit. Med. Journ.*, April 27, 1895.

The writer reports a case of ozena, cured by currettement of the diseased membrane, followed by an oily application, such as



ichthyol and olive oil. "I may add that the patients upon whom this method of treatment has succeeded, have been young, that is, from ten to twenty or thirty years of age."

PEARSALL.

**Hall, De Haviland.—A Case of Mycosis Fungoides.**  
—*Journal of Laryngol.*, July, 1895.

What is supposed to be the first case in which the larynx has been attacked by mycosis fungoides, was brought before the London Laryngological Society, by Dr. Hall. The patient, a man of fifty-two years, had suffered from mycosis fungoides for two years and a half. Numerous tumors were found all over the body and limbs. There were small oval tumors on the pharyngeal walls and on the left arytenoid cartilage is a tumor about the size of a hazelnut, the surface of which is superficially ulcerated.

PEARSALL.

**Dench, E. B.—Treatment of Acute Inflammation of the Middle Ear and Mastoid.**—*Mississippi Valley Medical Association.*—*Am. Medico-Surgical Bulletin*, November 15, 1895.

In the above paper the author strongly recommends in inflammation of the vault of the tympanum (evidenced by redness and tumefaction of the membrana flaccida, while the remaining portion of the membrane may be normal in color and luster), either with or without involvement of the mastoid, the local depletion of the tissues, and draining of the tympanic vault by an incision through the membrana flaccida from the short process of the malleus, or, when this cannot be located on account of the swelling, from the most prominent point of bulging, backward to the tympanic ring, and thence outward through the soft tissues covering the superior wall of the external canal for a distance of from one-quarter to one-half an inch. This deep incision relieves the tension due to the incipient mastoid inflammation, as this portion of the canal forms the floor of the tympanic vault and of the mastoid antrum.

The patient is to be confined to the bed, and an anti-febrile diet instituted. The canal is to be irrigated every two or four hours with a 1-5000 solution of bichloride.

In cases of mastoid involvement he advocates the abortive treatment by use of cold applied by means of the small aural ice bag of Dr. Sprague of Portland, or the Leiter coil. This is main-

tained for from thirty-six to forty-eight hours, and if at the end of that time the tenderness over the mastoid still persists, or again returns after having disappeared, no further benefit can be expected from its continued use, but the mastoid should be thoroughly opened.

In case the tenderness has disappeared, the patient is allowed to get up and move about, and a gradual return to full diet is made.

He deprecates the "Wilde's incision," holding that, if it seems indicated, the operator should go a step further and open up the mastoid cells. Strict antisepsis is enjoined. The head is to be shaved for a radius of three inches from the meatus in every direction and then scrubbed with soap and water, after which it is washed with ether and then with a 1-1000 solution of bichloride. The external auditory canal is washed with the same solution after which it is packed with iodoform gauze. The whole field of operation is then to be covered with a moist bichloride dressing until anæsthesia is complete, after which it is to be surrounded with towels wrung out of the bichloride solution. The instruments are to be thoroughly sterilized by boiling. With these precautions the cranial cavity can be opened if necessary in order to thoroughly eradicate the disease, or if accidentally opened owing to some anatomical anomaly the operator will feel much more safe as far as septic infection is concerned. "The entire cortex of the mastoid should be removed from the tip to the linia temporalis, and all softened bone be curetted away. The antrum should be opened invariably, even in cases where the disease seems limited to the superficial cells or in that form in which the pneumatic spaces at the tip appear to be most involved. The operator should assure himself that the probe introduced into the opening into the mastoid passes freely into the middle ear, and should also carefully curette this canal, to remove all softened bone and granulation tissue, and to secure perfect drainage."

RITCHIE.

**Booth, J. Arthur.—Mydriasis Cured by Hypnotism.—***N. Y. Academy of Medicine.—Am. Medico-Surgical Bulletin*, November 1, 1895.

A case of unilateral mydriasis accompanying flushing of the face of the same side, due to psychical paralysis of the sympathetic

was presented for examination. The patient was a female, aged twenty-two, married five years, but had never been pregnant. Menstruation was frequent and profuse. There had been no lesion of the eye discoverable to account for the mydriasis and blurring of vision. She had taken iodide of potassium, in doses of as high as 100 grains three times a day for two weeks with no benefit. She was readily hypnotized and the suggestion given her that the pupil would become smaller, she would see better, there would be no more blurring of vision, and no more pain. After the first séance the size of the pupil diminished one half and the cure was completed at the end of the seventh. The pupil remained normal for three months when the same condition presented in the left eye, which was treated in the same way and with like success.

RITCHIE.

**Von Bergmann.—Progress in Brain Surgery.**—*Centralblatt für Chir.*, xxvii, 1895.

In this article, in speaking of inflammations of the middle and internal ear, he says that owing to the general consensus of opinion that the tendency of these affections is to invade the brain and its meninges, such cases call for surgical interference along this line.

The suppurative inflammation extending to the brain coverings sets up a pachymeningitis, and produces an extradural and epitympanic, as well as an intradural abscess, and it is not until they attain a considerable size that they become more diffuse.

In undertaking to combat the lesion by surgical interference it is necessary to bear in mind that it may be imperative to open the cranial cavity, and the plan of operative procedure should be such that this end may be attained, if the case demands it, with the minimum amount of time and injury to the tissues, thus lessening the danger of septic infection and shock.

He draws a line in front of the ear, from the base of the tragus to the sagittal suture, and a second parallel to it from the posterior border of the mastoid process. The lobe of the ear is then separated from above downward within the borders of these two lines, thus having the squamous portion of the temporal bone included within these limits. He next removes a quadrangular plate of bone, giving free drainage to the tympanic cavity. An opening into the antrum can readily be effected by passing a



sound through the roof of the tympanic cavity into the antrum, and then opening it up. In this manner the products of suppuration may be removed and this without danger of injury to the facial nerve. Owing to the present light upon the management of septic infection of the sinuses, he advocates the opening of both the tympanum and sinuses at the same time. In making resection at the bone he uses a small circular saw driven by an electric motor.

RITCHIE.

**Gradle, H.—The Neurological Aspect of Asthenopia.**—*Medical Record*, December 2, 1895.

The author recognizes two degrees of asthenopia viz., *normal asthenopia*, in which refractive errors disturb the patient only by fatigue of the eyes and unsteadiness of sight, and in low degrees do not interfere to any extent with use of the eyes. In higher degrees the asthenopic symptoms are proportioned to the amount of ametropia present. Under the second form that of excessive or exaggerated asthenopia is classed all those cases in which the disturbance is disproportionately great as compared with the amount of refractive error. Here, even the smallest degree of ametropia may be associated with much discomfort as the result of reflexes varying in character and degree. The history of patients of the second class frequently reveals the neurotic temperament—the nervous system reacting to impressions in a different manner to that in average healthy subjects. The emotions are easily affected, and this form of activity may be accompanied by vasomotor and cardiac disturbances. They often have poorly developed muscles, which tire easily. A large proportion of children are found delicate and below average weight.

In some cases the hidden neurotic tendency is manifested later in life by the occurrence of nervous affections which were not present when the eyes were examined. He finds little connection with the second form of asthenopia and hysteria, where the former is remediable by glasses. On the contrary, asthenopia, which is not relieved by glasses, is not infrequently dependent on hysteria and is often associated with muscular anomalies.

The most frequent cause of exaggerated asthenopia is inherited instability of the nervous system. In the case of children, inquiry frequently reveals the existence of the neurotic disposition in one of the parents.

Organic nervous disease and alcoholism in the parents are



ætiologically small factors. Of acute affections, measles and influenza have been found to cause this condition. Typhoid fever, tuberculosis, and other debilitating diseases, render patients more sensitive to moderate refractive errors, but do not necessarily lead to nervous disturbances. Anæmia and chlorosis and functional digestive derangements are often found in these cases.

Diseases of the rhino-pharynx should also be mentioned. The author states in a dozen instances in his experience, children who had required glasses were again comfortable without them after a hypertrophy of the pharyngeal tonsil had been removed by operation.

A disposition to exaggerated asthenopia may be fostered by unhygienic habits, as persistent eye-work, confinement indoors, and the lack of muscular exercise. Asthenopic complaints started by the use of the eye at short distances may continue for days after the cause has been removed.

On the other hand, the building up of the patient by out-door exercise may remove the disagreeable symptoms without the necessity of stopping his work.

Mental worry and long periods of interrupted sleep have also been noticed as causing this condition.

The author deduces from his observations, that in all cases of disproportionate asthenopia, the physician should search for the latent cause and endeavor to remove it.

DEADY.

**Wood, Casey A.—A Case of Temporary Amblyopia from Chocolate.**—*Medical Record*, December 14, 1895.

The author cites a case of a physician, aged fifty-four, who in a period of twenty years, had suffered from over one hundred attacks of migraine accompanied by amblyopia, and the result of the ingestion of chocolate. The symptoms were as follows: A wheel-like confused whitish (not colored) mass, rotating in front of both eyes, and gradually increasing in size and density until the visual field was covered and he became practically blind. For ten minutes not even the largest objects could be perceived, there being only perception of shadows or ability to count fingers at a few inches. Later, vision was partially restored, the outlines of large objects, as houses and vehicles being perceived. In half an hour, smaller objects became visible, and at the end of one hour the patient could see as well as ever. The attacks were

always accompanied by vertigo, intense nausea, severe pain in, and a sense of pressure upon, the head.

During the long period mentioned, the patient had, from time to time, referred the attacks to various articles of food taken, and had abstained from each in turn until satisfied that he was mistaken. Finally an attack supervened immediately after eating some chocolate, and by further experimentation he became convinced that this was the sole cause.

Chocolate in blocks, or as creams, in cakes, in suspension as a drink or in ice cream, invariably precipitated an attack, the severity of which was proportionate to the amount of chocolate taken. He has been able to associate every seizure he has had for the past few years, with the previous eating or drinking of chocolate in some form, and he has had no attack not preceded by such indulgence. He is positive that a moderate use of cocoa does not affect him. It is now over a year since he ceased taking chocolate in any form, and during this period he has been entirely free from the infection.

The author considers it probable that the patient exhibits an idiocyncrasy against theobromine when taken in sufficiently large doses. The fact that ordinary cocoa contains much less of this alkaloid than chocolate apparently accounts for the fact that its moderate use is followed by no disagreeable results. Wood considers that this case establishes the claim of Hocken that chocolate occasionally affects the visual centers.

DEADY.

**Mayer, Emil.—Deviation of the Cartilaginous Septum ; Its Cure.**—*Am. Medico-Surg. Bulletin*, 1895, No. 22.

The writer, after some remarks on deviations of the septum, describes a case which he operated according to what is known as the Asch method. The details of the operation are as follows : The patient being etherized, and in this case some adenoid growths removed, the nostrils are sprayed with a cold solution of boro-lyptol. The adhesions between the septum and turbinates, if any exist, are broken up by a curved gouge. The cartilage scissors are then introduced, the blunt edge over the convexity and an incision made through the cartilaginous septum. The next incision is made as nearly as possible at right angles to the first and the finger introduced into the convex side, pushing the segments well into the concavity, care being taken at the same

time to separate them thoroughly. The hemorrhage, which is slight, is arrested and the septum straightened by compression with a long-blade nasal compression forceps. A snugly fitting vulcanite tube is introduced on the convex side, which holds the septum in place and effectually prevents secondary hemorrhage. A spray of Dobell's solution is used every half hour for several hours. The tubes are removed every day and cleansed. They should be worn all the time for five weeks, and at night only for a week longer. At the end of six weeks the septum was found perfectly straight and nasal respiration entirely free. During the past three years the author has operated twenty-one cases in this way, and claims for the Asch operation : (1) Permanent freedom of breathing through the affected side ; (2) a straightened septum ; (3) a reduction of the deformity to a minimum ; (4) it is of the least discomfort to the patient. (The principal objections which have been made to this method of operating, are the tendency to the profuse formation of granulation tissue, due, probably, to the perforations in the vulcanite splint and the occurrence of septal perforations of greater or less extent, resulting from lack of coaptation of the segments of the septum.—Abstr.)

PEARSALL.

**Ferreri and Garbini.—Enlargement of the Faucial Tonsils in Relation to Diseases of the Middle Ear.—**  
*Archiv. di Otol.*, 1895, iii.

After an extensive review of the subject, the writers give a detailed account of their bacteriological experiments made to determine the character of the contents of the tonsillar crypts. They reach the conclusion that, inasmuch as the crypts contain large numbers of pyogenic cocci, they are true latent foci of infection, and that this condition of affairs is, to a very considerable degree, responsible for acute attacks of purulent otitis media which follow minor operations about the throat. Therefore, for a few days previous to operation, the mouth and naso-pharynx should be carefully disinfected and precaution taken that no diphtheritic bacilli are present in the tonsil. The destruction of hypertrophied tonsils by means of galvano-cautery and ignipuncture not only does not destroy the bacterial organisms but opens new places for their entrance and seclusion. On this account, where hypertrophied tonsils are to be removed in cases



where the middle ear is involved, tonsillotomy is by far the preferable operation. PEARSALL.

**Lavagno, Dr.—Arecoline, a Myotic.**—*Sem. méd.* 1895, xv, p. cxiv.—*Am. Medico-Surgical Bulletin*, August 1, 1895.

Lavagno has found that arecoline, the alkaloid of areca catechu, energetically contracts the pupil of the eye—a drop of a one per cent. solution instilled in the eye produced contraction in three minutes, which persisted for fifteen or twenty minutes; its effect had entirely passed off in about an hour. Its effect upon the ciliary muscle is even more marked, and induced spasm, which lasted from seven to eight minutes. No action upon the accommodation was appreciable for two or three minutes after its instillation. Its use in the form of the hydrobromate is reported not to give rise to cephalalgia or other nervous symptoms.

RITCHIE.

**Jones and Buxton.—Endothelioma of the Brain.**—*Quarterly Medical Journal, Sheffield*, July, 1894.

The above authorities report a case occurring in a female of thirty-four years, who, a year previous to her death, complained of severe pains in the right frontal region, which were paroxysmal in character and accompanied by photophobia, lachrymation, slight loss of power of the levator palpebræ, and divergent strabismus of the right eye. Ophthalmoscopic examination disclosed a double optic neuritis, the swelling being more marked on the right side. Blindness, accompanied by atrophy of the optic nerve, followed. Vomiting was absent during the paroxysm. *Post-mortem* examination revealed an endothelioma of the right frontal convolution which had attained the size of a hen's egg and closely resembled the "nested sarcoma" of Gowers.

RITCHIE.

**Barr, Thomas.—A Treatment of Intractable Suppuration of the Middle Ear, by Operation Through the Mastoid, with Report of Eight Successful Cases.**—*British Medical Journal*, November 16, 1895.

1. In these eight cases the purulent mischief had been of very long duration. The duration of the shortest was three years; the others extended from fourteen to twenty-two years.

2. In every one treatment through the external meatus and



eustachian tube had been previously carried out—in no case for less than a year, and in some for as long as seven years.

3. In none of the cases did the secretion before operation ever lose the odor of decomposition.

4. In every case the seat of the purulent formation was, without doubt, chiefly in the attic, or attic and antrum, either with perforation in Shrapnell's membrane or other clear evidence that the essential mischief was in these regions.

5. In no case were there any objective signs of mastoid complications.

6. In all, the attic syringe had been employed, and in three cases the malleus had been removed, in order to allow of more efficient treatment of the attic.

7. The youngest was fourteen years, and the oldest thirty-two years. Six were males and two were females.

The operation was performed with a globular dental burr, supplemented by a gouge—the burrs being very hard and sharp; a dental engine of considerable power was used. In one case the sigmoid sinus was encountered, but this did not interfere with the progress of the operation.

In another, the dura mater on the floor of the middle fossa was exposed without untoward result. In most cases the cortical substance was found to be very thick and hard, the cells being partially sclerosed and converted into an ivory-like substance. The antrum was sometimes found suprisingly high up, even above the level of the linea temporalis, and deeply situated. In one case it was extremely small. The walls of the antrum were generally very hard, the strongest gouge producing little impression upon them, although the burr could always rub them down. When the antrum was freely opened, and all the morbid material removed, the antro-tympanic passage under the roof of the middle ear was exposed by the cautious working of a small burr to facilitate the removal from this space of the inflammatory products, and also the malleus and incus. When the tympanic cavity was situated far forward, it was found necessary to remove at least a portion of the postero-superior portion of the canal. While working in this deep region, a forehead reflector was necessary, with good light. The corresponding side of the face was carefully watched to detect the slightest twitch which might indicate dangerous proximity to the facial nerve. The after treatment consisted in

the thorough removal, by syringing with antiseptics, of all diseased products and pulverized bone, after which the spaces were filled with powder of iodoform and boracic acid (one part of former to four of the latter), and stuffed with gauze. A wood-wool pad, with an aperture for the auricle, was placed over the mastoid and side of head, and a bandage over all. In the absence of moisture through the dressings, the parts remained undisturbed for a week, and sometimes for a fortnight, when, if moisture appeared, the powder and stuffing were removed, with or without syringing the cavities. After the first two or three dressings, careful and regular antiseptic cleansing has been required for weeks and even months, in some cases after using this for a time, one insufflation of finely powdered boracic acid, blown into the canal, and into the artificial opening, seemed to stop secreting process.

In six cases the operation ultimately achieved the desired effect of stopping the discharge, and in no case has there been a recurrence up to the present time. In the other two there is a slight trace of odorless secretion, only requiring syringing once a fortnight.

In one case the hearing was notably improved, in three cases it was slightly improved, in two it was unaltered, in two the deafness was increased after the operation. DEADY.

**Illingworth, C. R.—Some Points in the Anatomy and Physiology of the Larynx.**—*British Medical Journal*, August 24, 1895.

The author points out fallacies in the theory that the larynx is a stringed instrument—claiming that it is like a cornet or trumpet. He also asserts that the falsetto voice is produced in the larynx, the organ being analogous to the lips in the act of whistling—also that the cords are acted upon by the crico-thyroid, and crico-arytenoid muscles at the same time. DEADY.

**Van Millingen, E.—The Statistics of Trachoma.**—*Annales D'Oculistique*, September, 1895.

As a result of a study of this disease from a statistical standpoint, the author deduces the following :

1. Trachoma is an infectious and contagious disease which predominates in uncivilized countries, and tends to disappear

with the progress of civilization and of hygiene. Hygiene and cleanliness are the best preservatives against trachoma.

2. Trachoma is not influenced by altitude ; it may spread wherever the people are uncleanly and live in poverty, quite as easily at altitudes from 1000 to 5000 meters as on the plains.

3. All races are equally susceptible to the virus of trachoma ; an immunity for certain races does not exist.

The disease is met with as well in the polar circles as in the temperate and equatorial zones. It is ordinarily found among the poorer classes and in unhealthy and uncleanly individuals. The well-to-do classes are rarely attacked. The number of trachomatous persons is in proportion to the number of illiterate.

The theory that negroes are immune is erroneous ; in Constantinople the proportions of negroes thus affected is twenty-four per cent. of the ocular diseases.

In the United States the disease is infrequent among negroes because of improved hygienic conditions.

Two factors are indispensable to the propagation of trachoma, viz., contagion and defective hygiene. Contagion alone is not sufficient to extensive epidemics. Uncleanliness and crowded living seem to increase its virulence.

DEADY.

### **Randall.—Effects on the Ear of Nasal Stenosis.—**

*Phil. Polyclin.*, 1895, iv.

The discomfort and impairment of hearing, which often accompany acute coryza in its nearly stages, cannot be attributed to stenosis of the Eustachian tube or to its being filled with secretion. On the contrary, the nasal obstruction is nearly always far anterior, the region about the mouths of the tubes not being at all involved, while the disturbance may be vasomotor rather than inflammatory. The aural symptoms are due, of course, to rarefaction of the air within, and consequent external pressure upon the drumhead. This, in turn, is due to the constant partial emptying of the middle ear by the act of swallowing while the nasal canal is closed, in other words, the performance of the Toynbee experiment. Strong inhalation while the nose is obstructed produces the same effect, while painful suction under these conditions is a symptom of an inflamed antrum. The author recommends, for the permanent relief of this condition, cleansing with an alkaline spray, the application of an oily



menthol-camphor solution, after which the inflamed surfaces are dusted with mercurius chloride. PEARSTALL.

**Garil.—Primary Lesion of the Nasal Septum.**—*Rev. de Laryngol.*, 1895, xvi.

Two cases are related by the author, occurring in men aged respectively thirty-three and twenty-two. In neither case could the source or mode of the syphilitic infection be determined. In one instance the lesion appeared as an elliptical ulceration with puffy and inflamed mucosa, the edges not being elevated, while the center was depressed and covered with a dark brown crust. There were mucous patches on the tonsils and diffuse macular syphilides on the body. In the other case the ulceration was whitish surrounded by a reddish zone, with swelling of the mucosa, causing considerable obstruction. Syphilis was denied in both cases. PEARSTALL.

**Fenn.—Elongated Tonsils, Simulating Quinsy and Hysteria.**—*Pacif. Med. Journ.*, 1895, xviii.

The writer was called to see a young woman said to be dying and found her gasping for breath. Cocaine was applied and the tonsils scarified without hemorrhage and without relief. Further examination showed that the tonsils were elongated to such an extent as to press upon the epiglottis. They were seized with volsellum forceps and a piece as large as a filbert was excised from each. The operation was followed by immediate relief. There was almost no hemorrhage. PEARSTALL.

**Santarnecki.—Hydraulic Curetting of the Cornea.**—*Annales d'Oculistique*, September, 1895.

The author employs Anel's syringe, using the large silver point and irrigating the cornea with a 1-1000 sublimate solution. A one per cent. solution of cocaine is instilled, and, separating the lids as far as possible, the ulcers or walls of the ulcerated abscesses, are attacked with the jet, applying it over the entire surface, and increasing the violence of the jet progressively, until all adherent ulcerated tissue is removed, after which a protective bandage is applied.

Where implication of the iris is suspected, atropine is instilled. The author claims superiority for the method, in that it attacks



only diseased tissue ; that, being fluid, its action is most thorough and searching, that the immediate reaction is insignificant, that pain and photophobia cease, that cleaning up of the surrounding cornea, and the process of repair are more rapid than by any other methods.

DEADY.

**Valude, E.—Cystic Angioma of the Orbit ; Electrol-  
ysis.**—*Annales d'Oculistique*, October, 1895.

The author reports the cure of an enormous exophthalmus, caused by orbital angioma resulting from traumatism in a girl aged fourteen. The case had been previously treated by puncture on three different occasions, and later by aspiration followed by compression and subcutaneous injections of ergotine, but all without success. It was finally cured by two applications of electrolysis eight days apart—a long steel needle being introduced into the orbito-palpebral furrow, at the point where the finger could most distinctly feel the presence of a deep tumour, and this was plunged to the fundus of the orbital cavity. The needle constituted the negative pole, the positive pole being applied near by on the cheek, a current of four and one half milliampères for five minutes. The tumor, which had increased for seven years, entirely disappeared in fifteen days.

DEADY.

**Baquis.—Rare Phenomena in a Case of Detachment  
of the Retina.**—*Italian Society of Ophthalmology.*—*Annales d'Oculistique*, October, 1895.

Several months after a detachment of the retina following traumatism, the visual function was re-established in the part that had been detached. The patient then noticed that he saw objects inverted in the horizontal sense, leading to the supposition that the retina functionated from luminous impressions received on its exterior surface.

DEADY.

**Guirm.—Ocular Manifestations of Vanillism.**—*Annales d'Oculistique*, October, 1895.

The writer gives the following ocular symptoms as occurring in vanillism, whether produced by ingestion or resulting from labor in its preparation.

First, a tension of the eyeball, a feeling of weight, soon followed by deep pain with peri-orbital radiation.

This condition is soon complicated by progressive diminution

of vision, which may go as far as amaurosis. By ophthalmoscopic examination, the disk is found highly congested; in some patients retinitis and consecutively chorio-retinitis occurs. The patient complains of a feeling of weight in the eyeball, which is sensitive to pressure, and the pupil is dilated. The writer calls attention to the analogy of the ocular symptoms with those of simple glaucoma.

DEADY.

**Duclos.—Treatment of Dacryocystitis with Fluorol.**  
—*French Congress of Medicine.—Annales d'Oculistique*, October, 1895.

Duclos claims excellent success in the treatment of dacryocystitis, by injection of 1-200 solution of fluorol (fluoride of sodium). The drug is more active and much less poisonous than sublimate and other solutions commonly used, causes no pain, and seems to possess a special curative action, produces no irritation, and less vascularity than other antiseptics. He reports that all cases are very rapidly improved and frequently cured.

DEADY.

**Ring, F. W.—Alveolar Sarcoma of the Optic Nerve.**  
—*New York Academy of Medicine.—American Medico-Surgical Bulletin*, December 1, 1895.

The patient, a woman, had had the left eye removed a year previous to the appearance of the growth, its extirpation being called for on account of pain and attendant inflammation.

A number of years previous to its removal the eye had been injured (the nature of the injury is not stated), but had remained quiescent until about thirteen months before the operation, when, on groping about in the dark, the patient struck the left side of the face and eyeball against an open door. A few days later the vision of that eye began to fail and blindness followed in a few months.

She was admitted to the Manhattan Eye and Ear Hospital on January 9, 1894, and one month later the eye was removed, at which time there was no appearance of a malignant growth. An artificial eye was worn for some months with comfort, but eventually she complained of pain in the orbit, which was temporarily relieved by the removal of the artificial eye. On January 9, 1895, a tumor was removed from the left orbit, which in size was

about that of the head of a pigeon. It had a well-marked pedicle, and was firm in consistency and of a grayish color. It was inclosed in a capsule composed of thick bands of connective tissue, in the layers of which were well-marked blood vessels. On examination the tumor was found to be divided into alveoli containing cells of an epithelial or endothelial character.

The patient died about ten weeks later, the symptoms indicating a metastasis of the liver.

RITCHIE.

**Sendziak.—Unusual Case of Syphilis of the Tonsil.**  
—*Rev. de Laryngol.*, 1895, xvi.

The writer gives a detailed description of a case which occurred in an unmarried woman of twenty-eight years. She had a severe sore throat for three weeks with slight fever at the commencement. The right tonsil was swollen vertically and was covered with a thick, bluish-white, fatty-looking deposit which was closely adherent to the subjacent membrane. The lingual tonsil was enlarged and reddened, but there was no deposit. The cervical glands were large and tender, but the superjacent skin was neither reddened nor adherent. Diphtheria was diagnosed, but the usual gargles, etc., produced no beneficial change. Syphilis was suspected and the patient was placed in a hospital for special treatment, but no history of either inherited or acquired syphilis being elicited, she was removed and under active applications of corrosive sublimate solutions the tonsillar swelling and membrane were somewhat reduced, while the pain on swallowing still continued. Sarcoma was then suspected and she was sent to another hospital. About this time the left faucial tonsil and the lingual tonsil became swollen and covered with white spots. Further questioning showed that the patient had, a couple of months before, lived with a brother who was being treated for syphilis, and it was at length resolved to resort to antisyphilitic treatment as a means of diagnosis. The patient was therefore put on large doses of the iodide of potash and local injections of corrosive sublimate. In less than two months the entire condition had subsided, leaving no doubt as to the character of the disease.

PEARSALL.

## BOOK REVIEWS.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES, a yearly report of the progress of the general sanitary sciences throughout the world, edited by CHAS. D. SAJOUS, M. D., and seventy associate editors, assisted by over two hundred corresponding editors, collaborators and correspondents; illustrated with chromolithographs, engravings, and maps. Five volumes. 1895. The F. A. Davis Co., Philadelphia, New York, and Chicago.

This valuable addition to our literature is again before us, the edition for 1895 containing 186 pages devoted to Ophthalmology, 54 pages to Otology, and 154 pages to Diseases of the Nose and Throat, a total of 394 pages to the three branches. Among the many valuable reports collected from various parts of the world, we note the following :

Velhagen reports the microscopic examination of the eye of a pig, in which the optic nerve was absent. Externally the eye was otherwise perfect. The lens was present in a state of partial development, the capillary layer of the choroid but slightly developed, and there were very few of the larger arteries and veins. The ciliary bodies were unusually large. The retina contained the pigment layer alone without a trace of nervous elements.

Swazey has seen an instance of coloboma of the iris, ciliary body, choroid and optic nerve sheath, in the left eye of a woman, nineteen years old. A coloboma of the lens has been observed by Theobald. The notch was in the lower periphery of the lens of the left eye.

Marple reports an instance of double coloboma lentis with upward dislocation in a highly myopic patient, the colobomata embracing about one-third of the lower half of the lens, and being almost symmetrical.

Pinkard has observed congenital dislocation of the lenses in two sisters, the displacement being downward in both cases.



Axenfeld describes an anomaly of the retinal veins. The greater part of the venous blood was carried out of the eye by a large superior and inferior cilio-retinal vein at the equator. These veins received numerous branches and became thicker as they reached the periphery and finally terminated in a heap of chorio-retinal pigment in the neighborhood of the vorticosi veins. The central retinal vein was small, and did not anastomose by any of its branches with the foregoing.

Green has examined the goblet cells of the conjunctiva in thirty human eyes, and finds that these cells exist normally at all ages, and that their primary function is the secretion of mucus.

Wallace claims to have seen nerve fibers in the crystalline lens. He states sections demonstrate the existence of two white cords in the lens capsule—one near its outer surface, appearing to cease at the insertion of the suspensory ligament, the second near the inner surface, giving off fine twisted strands, some of which reunite and proceed as lens fibers.

Snellen has made a microscopical study of the dots that were present in two cases of descemetitis. In one they were found to consist of a conglomeration of short bacilli; in the other they were made up of cells with the same form of bacilli between them. He concludes that descemetitis is a distinct disease of microbic origin, beginning in the anterior chamber, and that the accompanying irritation of the uveal tract is induced by the secretion of toxines.

Knies has experimented upon animals to discover the avenues of exit of fluids from the eye, by means of pathological changes, induced by injecting aseptic agents into the vitreous, capable of exciting inflammation. He found that the fluid obtained egress through the fissures in the tissue, and not through any closed spaces. (For the greater part, through the angle of the chamber, and the sclera, into Huon's capsule, and to a less degree, into the subconjunctival tissue, by way of the unchanged cornea.) The posterior lymph spaces in the optic nerve, especially in its connective-tissue work, showed evidences of inflammatory change. He was also able to produce prodromal symptoms of an attack of glaucoma by similar injections, and thinks that he has proved the falsity of the theory of the neurotic nature of glaucoma; insisting upon the pathological difference existing between glaucoma simplex and acuta, the former being a form of atrophy of the

optic nerve with excavation, and the latter a result of iridocyclitis.

Ree has examined a number of individuals, by making them draw the figures as they saw a point of light at different distances from their eyes, and has found that the acuity of the normal eye was about one and one-half. An acuity equal to, or less than one, always indicates an irregularity in the refracting media, and the degree of these irregularities corresponds in general to the diminution of the visual acuity.

Angelucci of Palermo finds that extirpation of the superior cervical ganglion in newborn animals results in alopecia of the same side of the face and dystrophies of the cranial bones and of the teeth. The development of the cornea is arrested, the eye becomes atonic, the caliber of the choroidal vessels diminishes, and the tract atrophies. Removal of the Gasserian ganglion produces contraction of the ocular vessels followed by neuro-paralytic lesions of the cornea.

Risley has prepared tables based upon two hundred thousand formulæ for eyeglasses and spectacles in Philadelphia, partly from his own cases and partly from the books of optical companies. The total number of eyes for which distance glasses were furnished by opticians was 187,018, of which  $21\frac{6}{10}$  per cent. were for myopia. Of these,  $29\frac{5}{10}$  per cent. were for simple myopia, and  $60\frac{5}{10}$  were for myopic astigmatism. Among the private cases, however, where the examination was made under mydriasis, 22 per cent. were myopic; of these only  $9\frac{6.7}{10}$  per cent. were of simple myopia, while  $90\frac{3.3}{10}$  were astigmatic in varying degrees. In a very large number of patients there was mixed astigmatism on one side, whilst on the other there was either simple or compound myopic astigmatism.

Guilloz claims to have proved the existence of accommodative astigmatism of the crystalline lens. In both of the observations made by him the patients were able to overcome cylindrical glasses of varying strength, but this was impossible after atropinization of the eye. Care was taken to eliminate the action of the lids during the experiment.

From the study of astigmatism resulting from wounds to the cornea, Bates formulates the following propositions:

1. A corneal incision lengthens the radius of curvature of the corneal meridian at right angles to the line of incision and does

not flatten any other meridian. The astigmatism produced is a regular astigmatism, and is corrected by a convex cylinder at an axis parallel to the line of incision.

2. The immediate result is greater than the ultimate result.

3. The astigmatism produced is permanent after a length of time, at least a month after the cornea has healed. There may be at first three diopters of astigmatism produced. At the end of a month there may be two dioptries. At the end of three months the astigmatism may still be two diopters, and this amount will be permanent.

4. The amount of astigmatism produced is greater, the nearer the incision is to the center of the cornea; as much as nine diopters can be produced.

5. Mixed astigmatism occurs (*a*) temporarily, (*b*) with incarceration of the iris. He reports two cases of astigmatism where corneal section improved vision, although the ophthalmometer did not reveal any diminution in its amount.

Hudson finds the ophthalmometer to be a very unreliable instrument, especially in estimating low degrees of astigmatism. Of 144 cases, the results were incorrect and misleading in 99 instances.

Apropos of the removal of the lens in high myopia, Pflüger states that it is his practice to needle but one eye in these cases. From his statistics, comprising twenty women and ten men, he concludes that the age of individuals seems to have no influence upon absorption. When the myopia is between seventeen and twenty-two diopters, the increase of vision is inferior to that obtained in lower degrees. Believing that a lower degree of hypermetropia is preferable to a myopic state, he fixes the inferior limit at ten diopters for children, and twelve diopters for adults. In all of his cases vision improved, sometimes doubled, or even trebled and remained permanent.

Morison believes that a roughly fan-shaped sub-conjunctival hemorrhage on the outer aspect of the eyeball is diagnostic of a fracture through the orbital plate of the affected eye. He cites three cases.

Goldzieher has found that the lachrymal gland is supplied by the facial nerve, and that one-sided weeping is due to a paralysis of that nerve, the fifth nerve having nothing to do with the innervation of the gland.



Tepliachine, from experimental research, states that the cervical sympathetic nerve is the secretory nerve of the lachrymal gland, and controls lachrymation.

Berger reports a case of conjunctival disease which the patient believed to be due to the use of a public opera glass.

Sourdille reports six cases of pseudo-membraneous conjunctivitis, comprising superficial croupous conjunctivitis, and true diphtheritic conjunctivitis, in which the bacillus of Loeffler was found. The latter was never found isolated, but always associated with the staphylococcus or the streptococcus, at times, with both. In the most benign cases, the bacillus of Loeffler was associated solely with the staphylococcus, the cases being of the croupous type. He concludes that there is no essential difference between croupous and interstitial conjunctivitis—that both are the result of the same process, but in the one case, the lightness of the infection or the resistance of the tissue produces the superficial variety.

Scott has found cyanide of potassium a most potent agent in the treatment of trachoma—a four per cent. solution being applied once a day to the conjunctiva, and a one-fourth per cent. solution instilled two or three times daily.

Two cases of sympathetic ophthalmia are reported by Thompson, the first being remarkable from the fact that the inflammation did not develop until fourteen months after the enucleation of the exciting eye, and the second from the fact that there was a most extraordinary decrease of the intraocular tension.

Bitzos believes that initial lesion of glaucoma simplex consists in a papillitis interfering with the passage of the lymph from the eye, and producing an increase in the intraocular tension. This form of the disease is only an attenuated variety of the inflammatory type, the initial papillitis having an almost characteristic appearance, resembling the form seen in retinitis pigmentosa.

The foregoing will serve to indicate the interesting character of the selections comprised in the 186 pages devoted to ophthalmology, which include rare cases in great variety, new methods of treatment, operative and otherwise, and a large number of instruments devised for various purposes. Fifty-four pages are given to otology, in which all branches of the science are considered by many of the ablest authors of the world. Diseases of the nasal cavities, intubation of the larynx, and diseases of the thyroid gland receive attention in 154 pages, filled with matter



most interesting to the specialist in these branches. The work is almost a library in itself, with the added advantage which some libraries do not possess, that much of its material is new. We consider the *Annual* one of the most valuable of medical publications.

**THERAPEUTICS OF THE EYE.** By CHAS. C. BOYLE, M. D., O. et A. Chir., Surgeon to the New York Ophthalmic Hospital; Professor of Ophthalmic and Aural Therapeutics in the College of the New York Ophthalmic Hospital, etc., etc. New York, Boericke, Runyon & Ernesty. 1896.

Dr. Boyle's valuable work comprises three sections, of which the first is devoted to the ocular symptomatology of the various remedies which have been found useful in the treatment of diseases of the eye, arranged alphabetically, together with the aggravations and ameliorations and general indications for their use.

As stated in the preface, all symptoms given have been verified more than once either by provers or by cures. Scattered throughout the text will be found a large number of symptoms, distinguished by an asterisk, indicating that the author has verified them in his own practice.

In Part II, with the caption "Applied Therapeutics," the remedies are rearranged with special reference to their action upon the different parts of the eye anatomically considered; thus under "Conjunctiva" will be found a complete alphabetical list of the drugs affecting this membrane with the special symptoms calling for the use of each remedy.

Throughout both sections comparisons are freely given in brackets.

The third division consists of a repertorial index, the symptoms here being also recorded in alphabetical order, together with the appropriate drugs, the whole forming a most complete arrangement and rendering it easy to find any symptom contained in the book.

As a surgeon on the staff of the New York Ophthalmic Hospital, of many years standing, Dr. Boyle had enjoyed the largest opportunities, under the most favorable circumstances, for qualifying himself in this branch of work—always a careful and painstaking prescriber, he possesses the confidence of his fellow surgeons in a high degree, and, as one of his colleagues, we take

great pleasure in recommending this most excellent result of his labor to the profession at large.

CHARLES DEADY.

SKIASCOPY AND ITS PRACTICAL APPLICATION TO THE STUDY OF REFRACTION. By EDW. JACKSON, A. M., M. D., Professor of Diseases of the Eye in Philadelphia Polyclinic and College for Graduates in Medicine, Surgeon to Wills Eye Hospital, etc., with twenty-six illustrations. Philadelphia, The Edwards & Docker Co. 1895. Price, \$1.00.

This is an exceedingly well-written monograph on a subject of interest to all ophthalmologists. Beginning with a history of the method, the reader is enlightened as to the best means for its study, and the difficulties to be overcome, the proper instruments to be used, the source and degree of illumination most suitable for the purpose, and all other conditions conducing to accuracy in the result. Excellent plates are given of the appearances in all forms of refractive error. Chapters VI and VII are devoted to a practical application of the system, the use of the plane and the concave mirror respectively being described with great care and minuteness of detail.

The work is a most able and exhaustive exposition of the subject, full of precise and valuable information, presented in a most readable form, and will be appreciated by every scientific reader.

THE EYE IN ITS RELATION TO HEALTH. By CHALMER PRENTICE, M. D., Chicago. A. C. McClurg & Co. 1895.

This book is devoted to the elucidation of some very advanced theories in relation to muscular defects; so advanced, indeed, that the author is either a victim of the "fog" in which he envelops his patients, or he is very far ahead of the rest of the ophthalmological world. The work is based upon the premise that many general diseases, including some of the most serious, viz.: phthisis, diabetes mellitus, locomotor ataxia, paralysis, etc., are due, not simply to the existence of muscular anomalies, but to their successful repression, and the consequent serious disturbance of the nervous centers. He denies the existence of weakness or insufficiency as a cause of a loss muscular balance, and claims that in all cases of this class, either anatomical shortening or spasm is present. In the treatment of patients, his efforts are entirely directed to the development of suspected latent heterophoria, for which purpose he caters to any

manifest want of balance, by the prescription of prisms, with their apices in the direction of the apparent insufficiency, or by "fogging" the vision by the use of strong convex lenses, with the design of placing the accommodation entirely of rest, and thereby rendering manifest considerable amounts of latent hypermetropia which is refractory under the most energetic mydriatics. He claims that corneal astigmatism is due to spasm of the ocular muscles, whereby the curvative of the membrane is altered by contraction, and has seen it frequently disappear by the removal of this cause. When the supposed total error in balance has been developed, by the use of prisms, etc., as mentioned above, it is to be freely operated by tenotomy or advancement as indicated. The author evidently believes thoroughly in what he writes and cites numerous cases of cure of the most serious diseases.

STUDENT'S AID IN OPHTHALMOLOGY. By GERTRUDE A. WALKER, A. B., M. D., Clinical Instructor in Diseases of the Eye at the Woman's Medical College of Pennsylvania. With forty illustrations and colored plate; pp. 183. Philadelphia, P. Blakiston, Son & Co. 1895.

This little work is well written and beautifully gotten up. Its greatest fault is that it is too elementary. The preface states that it "is intended for study preliminary to a course of clinical lectures upon the eye, or for reference during attendance upon such a course." Again, "it is hoped that the book may prove useful to practitioners who desire to obtain sufficient knowledge of the specialty to enable them to diagnosticate and treat cases of ocular disease."

We feel obliged to say that if this was the intended purpose, it can hardly be said to have been attained, especially in the case of the second statement, as the practitioner willing to attempt to "diagnosticate and treat ocular disease," with only the knowledge derived from its perusal, could only do so though the courage derived from ignorance of the subject.

In making this statement we do not wish to be understood as attacking the ability of the author, but, rather, her judgment in providing mental pabulum in such extremely small doses. In many cases the descriptions of disease amount to little more than definitions of the name. One of the results of this extreme brevity will be found on page 119, where tuberculosis of the choroid, one of the rarest of diseases, is grouped with the other



affections of this membrane, with the remark preceding a brief description of the appearances, that it "occurs usually in the miliary form." While this statement is true, in this as in other instances, the effect is to give the reader the idea that the disease spoken of is as commonly found as other forms grouped with it. A number of operations are described, and plates of instruments are given, both of which seem to us somewhat out of place in so elementary a work.

Notwithstanding these shortcomings, we would not condemn the work, as many of the methods of examinations and treatment are clearly stated, in language easy to understand and pleasant to read. As a primer for those desiring to begin the study of ophthalmology, it has its place.

The press work and binding are excellent.

THE PRACTICE OF MEDICINE. By WM. C. GOODNO, M. D., Professor of Practice of Medicine in the Hahnemann Medical College of Philadelphia, Physician to the Hahnemann Hospital, etc. With sections on Diseases of the Nervous System, by CLARENCE BARTLETT, M. D., Lecturer on Nervous and Mental Diseases in the Hahnemann Medical College of Philadelphia, Senior Neurologist to the Hahnemann Hospital, etc. Vol. II, Diseases of the Circulatory, Respiratory, Urinary, and Digestive Systems, Diseases of the Blood, and Constitutional and Parasitic Diseases, pp. 981. Philadelphia, Hahnemann Press. 1895.

The good opinion expressed of the first volume of this fine work is fully sustained by the one work before us. The diseases of the nose, pharynx, larynx, and esophagus are presented in Vol. II, and are quite fully considered for a work of this character, the methods of examination being well described and the terse and vigorous presentation of the phenomena and treatment of the various diseases in this department, as in all others comprised in the work, being well calculated to hold the attention of the reader and to impress the salient points upon the memory.

Attention is called to the chapter upon the examination of the urine, the subject being very fully treated, and freely illustrated, with cuts of the various instruments used and of the appearances under the microscope of the different precipitates.

However, where so much excellence exists, it is unnecessary to go into details. We congratulate the author and the school upon the successful completion of this magnificent addition to our literature, which should, and doubtless will, become one of our standard text-books.



# THE JOURNAL OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

---

EDITOR.

CHARLES DEADY, M. D.

ASSOCIATE EDITORS.

F. G. RITCHIE, M. D.

CHARLES E. TEETS, M. D.

WM. S. PEARSALL, Ph. B., M. D.

---

## A TYPICAL CASE OF GUMMA OF THE CILIARY BODY—WITH REMARKS UPON SYPHILITIC TUMORS OF THE ANTERIOR PORTION OF THE UVEAL TRACT IN GENERAL.

BY DR. OSTWALT, PARIS, FRANCE.

WE know to-day that two or three out of every hundred or more persons suffering from syphilis present a simple specific iritis at some time during the course of their disease. Infinitely smaller is the number of patients in whom syphilitic tumors of the iris or ciliary body are found. Notwithstanding this impediment, a very respectable list of cases may be discovered in the literature of ophthalmology. At the same time considerable confusion exists concerning the nosological classification of these tumors. Although Desmarres (1), in 1855, applied the term "papules" to those syphilitic proliferations of the iris which appear contemporaneously with, or some time after, a syphilitic eruption on the head, and upon the condylomatous nature of which he has laid great stress, nearly all authors of all nationalities have continued to describe as gummata of the iris or of the ciliary body, every growth in these parts of the uveal tract occurring in a syphilitic, without attempting to differentiate the clinical characteristics of these tumors, or the period of the syphilitic diathesis during which they appeared.

Even the work of so conscientious a writer as Widder (2)

which appeared in 1881, has made no change of any importance. The author has shown that gummata of the iris are extremely rare, and that almost all of those that have been diagnosed as such have been in reality only syphilitic papules. M. Widder states the differential characteristics of papules or condylomata of the iris on the one hand and of true gummata of that membrane, as follows :

“The papule is a species of tubercle of greater or less size, forming upon the iris a flattened elevation (lenticular type), or projecting from the iris in the shape of a club or cone (miliary type). It is abundantly supplied with vessels, partly from the stroma of the iris and partly of neoplastic origin, and for this reason its color varies from reddish-yellow to deep brown or brownish-red.”

Involution takes place by simple resorption. At the most, there is sometimes seen at the point where the papule has been, a slight atrophy of the superficial tissue of the iris.

Gumma of the iris, on the contrary, like gumma elsewhere, is extremely poor in vessels. For this reason its color is yellow or yellowish-gray, and, in consequence of its insufficient vascularity, it undergoes granular or caseous degeneration, which proceeds from the center toward the periphery, and sooner or later causes the breaking down of the tumor.

These views of Widder's are, at the present, shared by nearly all ophthalmologists who are authorities on this question. I will cite only Panas (3), Alexander (4), and Fuchs (5).

We must then distinguish clearly between papules of the uveal tract, having the above characteristics and which are manifestations of the secondary period of the disease, from gummata which appear only in the tertiary stage of syphilis. While the first has a certain predilection for the surface of the iris and ciliary body, the iris does not lend itself readily to the primary development of gummata on account of its slight and delicate structure. This fact was noted long ago by Virchow. These tumors are more often primarily

located in the ciliary body, from which they spread secondarily either to the vitreous body and choroid, to the iris and the anterior chamber, toward the sclerotic and conjunctiva, or in all of these directions at the same time.

A certain number of authors base their diagnosis of a syphilitic tumor of the ciliary body, solely upon the existence in the syphilitic subject of a more or less marked projection of the ocular globe near the border of the cornea, that is, in the ciliary region. We believe that it may be positively affirmed that this symptom alone is not sufficient. This tumefaction upon the surface of the globe may simply be due, in the case of the papule or gumma of the ciliary body, to a secondary encroachment of vegetations upon the sclerotic or episcleral tissue. If then there is only the said external swelling, without other conclusive proofs of the presence of an affection of the ciliary body, we are warranted only in speaking of a papule or gumma of the sclerotic or episclera, as has been done, among others, by Panas (6), Galezowski (7), and Fromaget (8), in their description of cases where only the above-mentioned symptom was present.

In spite of the development of the external tumor accompanying or preceding a simple plastic iritis, the diagnosis of "primary syphilitic of the ciliary body" is not sufficiently positive, although the invasion of the uveal tract may be more probable on that account. This probability is much increased by the presence of flocculence of the vitreous body. The diagnosis in question only becomes absolutely sure when it can be shown that an intra-ocular swelling is present in the ciliary region before or at about the time of the appearance of the external tumor.

If, according to these principles, we analyze the cases of so-called tumors of the ciliary body published by ophthalmologists, there are few that could withstand our criticism. In a recent work, Busse (9) has endeavored to bring together all the cases to be found in the literature of the subject. Of these there were twenty-four, to which he added



a case of his own. We have gathered four others, which makes the total twenty-nine.\*

Judging them from the descriptions, which many times were far too summary in character, we find fifteen of these twenty-nine cases to be syphilitic papules, viz.: Two cases by Arlt (10), two cases by Schmidt (11), the last three cases by Barbar (12), one case by Fuchs (13), the second, third, fourth, and fifth cases by Ayres (14), one case by Busse (*l. c.*), the first case reported by Alexander (15), and one case by M. Seggel (16). At least five of these fifteen cases (Barbar's second case, Ayres' second, third, and fifth cases, and Seggel's case) failed even to fulfill the conditions of which we have spoken above, and which are necessary to establish the diagnosis of papule of the ciliary body.

Eliminating these fifteen cases there remain fourteen which may perhaps merit the name "gumma of the ciliary region." But there are five cases among the fourteen that have been published, in which the details were insufficient to render possible any decision as to which category of syphilitic tumors they should be referred. These are Arlt's two remaining cases (17), Mauthner's case (18), Alexander's second case (19), and that of Conner (20).

There remain then altogether only nine cases where the gummous nature of the tumors of the ciliary region appeared almost assured. Of these nine cases it is more than probable that four were simple subconjunctival gummata, with nothing to justify the diagnosis of syphilitic tumor of the ciliary body—Barber's first case (*l. c.*), Ayres' first and last case (*l. c.*), and Campart's case (21).

The number of cases of true gummata of the ciliary body is reduced, according to our view of the matter, to the the modest total of five. Again a reservation must be

\* In editing the present memoir two cases were overlooked, that of Nitot (26) and that of A. Terson (27). Both of these cases seemed surely to be primary syphilitic tumors of the ciliary body, but, the authors to the contrary notwithstanding, we do not hesitate to class them among the *papules*. In Nitot's patient as well as Terson's, the swelling of the ciliary body appeared at the beginning of the secondary period, and nothing in their clinical symptoms would force us to admit the onset of the tertiary stage.



made in regard to Von Hippel's case, where the gumma invaded all the membranes of the eye. It is a question in this case if "gumma of the ciliary body" is a proper term. The author himself did not choose it, and I should have let the case pass if Busse (*l. c.*) had not placed it among the tumors of the ciliary body.

In the whole range of medical literature there have been, as far as I can see, only four cases of indisputable gumma of the ciliary body. These are the cases of Alt (23), Woïnow (24), Loring-Eno (25), and Widder (*l. c.*). In Alt's case the diagnosis was not even suspected until after enucleation; Knapp having performed the operation on account of a very serious "specific irido-cyclitis." The anatomical examination alone showed the presence of a gumma which had penetrated neither into the anterior chamber nor through the sclerotic.

In Woïnow's case also the tumor increased wholly in the direction of the vitreous body, but it could be made out with the ophthalmoscope with oblique illumination.

Finally in the cases of Widder and Loring-Eno the gumma spread, in the first case into the anterior chamber, and in the other, through the sclerotic just below the conjunctiva.

The preceding account serves to show the extreme rarity of gumma of the ciliary body. I therefore believe myself authorized in giving in a little greater detail a case of gumma of the ciliary body that I have been enabled to see lately, in which it has been possible to watch, step by step, the different phases in the evolution of the tumor. This case offers more than a purely ophthalmological interest in that we are permitted to draw from it some conclusion as the process of involution of gummata in general.

CASE. On the 3d of June, 1895, I was called to the house of M. K., thirty-nine years of age, who had been confined to bed for several weeks on account of an acute cystitis of unknown origin. The patient said that for eight days his right eye had been inflamed, and that during the past forty-eight hours the inflammation had increased very much.

I was able to demonstrate the following condition :

The right eye was the seat of an intense episcleral injection, with here and there some small ecchymoses. The whole cornea was slightly involved. Above and to the outer side, just at the scleral border of this membrane, a little, yellowish-white spot about one and a half to two millimeters in diameter could be seen.

At first I took this spot for a very deep, little, marginal abscess of the cornea, and did not think that any connection could exist between this condition and a syphilitic infection that the patient had experienced fourteen years previously, and which had been treated at that time according to the Raspail method. No syphilitic manifestation had presented itself during this time. He had been married for eight years, and his wife had given birth to three children, free from all hereditary taint and to all appearances perfectly healthy. She had aborted only once between two normal accouchements. She is at present *enceinte* for the fifth time, and her pregnancy is approaching its termination with no signs of any trouble.

I prescribed, at first, a simple antiphlogistic treatment (leeches on the temple, hot sublimate compresses, and instillations of atropine to counteract the slight irritation of the iris).

This treatment brought about a certain diminution in the diffuse trouble of the cornea, but did not prevent the extension of the above-mentioned yellowish-white spot.

As early as the second visit on the fifth day of June, I became convinced that this spot did not have its origin in the corneal tissue, but from a small proliferation which proceeded from the angle of the anterior chamber and came in contact with the posterior surface of the cornea.

It formed the point of departure of a gelatinous exudation, which filled a part of the temporal half of the anterior chamber, and did not disappear for some days.

The little swelling increased in volume from day to day.

On the 7th of June I discovered below and to the outer side of the first nodule a second vegetation, rounded

like the first, and, like it, proceeding from the angle of the iris. Five days later the second nodule was followed by a third, lying close to it.

From the tenth day, that is from the time that I became convinced that I had to deal with a gummous tumor, I instituted antisyphilitic treatment. (Every other day, at least, an injection of one centigramme of sublimate was given.)

At first the swelling increased in spite of the treatment. The three projections increased in volume in every sense, and the anterior chamber grew deeper in its temporal half. The three little nodules became more and more confluent, and their surfaces, at first smooth, grew irregular.

At no time was I able to discover vessels in the tumor.

The tension of the eye was slightly increased during the development of the last nodule, and the patient complained at times of other symptoms characteristic of a somewhat mild glaucoma.

In the meantime a very intense iritis intervened. The pupil was covered with a thick exudative membrane, and the visual acuteness was reduced to the simple perception of light.

On the 17th, that is to say, three weeks after the appearance of the first symptoms, two weeks after my first examination, and a week after the inauguration of the specific treatment, the tumor, which then appeared as a single mass, occupied the upper external third of the anterior chamber and advanced as far as the edge of the pupil, which was much contracted. Still even at this time it could be clearly shown that a small slit separated the lower internal border of the gumma from the iris.

There was also noticed for the first time a subconjunctival projection in the shape of a flattened lentil, which had developed near the upper and outer edge of the cornea, at a point corresponding to the site of the intra-ocular tumor.

This tumor had increased in a peculiarly rapid fashion during the past two days. But, in spite of this, the intra-ocular tension became normal again, and I discovered at



the bottom of the anterior chamber a small linear hypopyon. In reality this hypopyon was composed of the little specks of *débris* of the tumor on the road to disintegration, which had been precipitated to the bottom of the anterior chamber, and which could be distinguished as such by means of a corneal lens.

The appearance of this pseudo-hypopyon, as well as the return of the normal intra-ocular tension in spite of the rapid growth of the gumma, made me believe that the four injections of sublimate already given had been sufficient to arrest the development of the tumor, and prepare the way for its retrograde metamorphosis. The rapid increase in the volume of the tumor, and the coincident diminution of the tension of the eye, could only be accounted for by an absorption of the aqueous humor, while the pseudo-hypopyon was an indication of the imminent breaking down of the gumma.

In fact, when I saw the patient two days later, the appearance of the eye had changed in a very striking manner. The gummous tumor of the anterior chamber had entirely disappeared, as do masses of coagulated albumin in a solution of acidulated pepsin, and, at the same time the aqueous humor was found to be in a state of pronounced opalescence. The pseudo-hypopyon had considerably increased, and yellowish gummous particles, the *débris* of the tumor, could be clearly distinguished.

I would emphasize the fact that the part of the iris which had been at first covered with gummous proliferation differed in no respect from the rest of that membrane, which proves that the swelling had not encroached upon the ocular diaphragm, but had been simply interposed between it and the cornea. After the removal of a slight diffuse trouble, and of a small, white, opaque, slightly vascular, semilunar spot, situated at the extreme periphery of the cornea where the gumma had first appeared in contact with that membrane, the cornea was found to be but little changed.

As for the projection of the sclerotic, it was sensibly

more pronounced than it had been two days before. The increase in volume had been so rapid that I had no hesitation in attributing it to absorption, and in foreseeing its prompt removal.

I had made no mistake. Four days later, that is on the 23d of June, the sclerotic prominence had disappeared, and the globe of the eye, up to this time much deformed, had returned to its normal shape. I had then given only eight injections of sublimate.

From this time the clearing of the cornea and the aqueous humor made rapid progress. Under the action of atropine or duboisine, the posterior synechiæ were broken up with the exception of some that remained permanently. The pseudo-hypopyon disappeared after a few days. There remained only a certain number of small, brownish, punctiform deposits on Descemet's membrane, which passed away by absorption in a short time.

After the ninth injection of sublimate, mercurialization seemed to intervene, as indicated by the appearance of a very slight stomatitis. The patient was given  $2\frac{1}{2}$  grains of iodide of potash every day in place of the sublimate, and this treatment continued for some weeks.

On the 2d of July the visual acuteness of the diseased eye had returned to almost  $\frac{6}{8}$ . I was able to make a minute ophthalmoscopic examination, and could discover no trouble of the vitreous body nor any intra-ocular changes.

Fifteen days later the ocular globe presented no further trace of injection or of photophobia.

I saw the patient in October, and his eye had remained cured, the vision being almost  $\frac{5}{5}$ .

Let us attempt a short review of the case.

A patient having acquired syphilis fourteen years ago, and having had no manifestations of the disease since that time, is suddenly attacked by cystitis, and then by a characteristic intra-ocular swelling, which proceeded from the angle of the anterior chamber. There also appeared projection of the sclerotic near the border of the cornea. After an existence of two or three weeks, during which the

patient had received nine injections of sublimate, the intra-ocular tumor disappeared, breaking in pieces and forming a pseudo-hypopyon, which was promptly absorbed. In a few days the prominence of the sclerotic disappeared in its turn, and everything came back to the normal state. Of all the alarming pictures which made me fear at one time the approaching loss of the eye, there remained finally only some posterior synechiæ and a small spot, of no great importance, on the periphery of the cornea. The eye recovered its normal vision.

In these occurrences I would draw attention to the prompt action of the anti-syphilitic treatment, and also to the fact that there was not a shadow of doubt that the trouble with my patient was a tertiary manifestation of syphilis. The cystitis which had resisted non-specific treatment for weeks, and which was rapidly cured by injections of sublimate, was probably also the result of syphilis. It is probable that there may have been a tertiary ulcer of the bladder, such as has been occasionally observed.

As for the eye, no one could contest the diagnosis of gumma. The method of formation of the little round nodules, the absence of vessels, its yellowish-white appearance, and finally the involution by degeneration and breaking down, are characteristic enough to remove any doubt in that respect.

The special diagnosis of "gumma of the ciliary body" does not seem to me to be subject to objection any more than the general diagnosis.

For we have a tumor which makes its way into the anterior chamber across the angle of the iris, to locate itself between the iris and the cornea, which, moreover, invades the sclerotic at the edge of the cornea and raises it up in a little projection. Where could such a tumor have its point of development, if not in the uveal tract?

While in the cases of Alt and Woïnow the gumma of the ciliary body developed radially toward the center of the eye, in mine the direction of encroachment was much more oblique than in the cases of Loring-Eno and Widder.



This oblique direction probably explains the absence of flocculence in the vitreous, it being more likely to occur in a case radially developed.

What distinguishes my case from all the others is the restoration of perfect vision ( $V = \text{pr. } 5/5$ ). In Widder's case, which also terminated in a cure, that is, in the disappearance of the tumor, the acuteness of vision was reduced to  $6/24$  of the normal.

Let us take the 29 cases of syphilitic tumor of the ciliary region which we have analyzed above, and note how they terminated.

We shall be obliged to eliminate one case because the result is not reported.

Twenty-eight cases remain, and of this number 16 cases, or 57 per cent., suffered the loss of the eye (enucleation or atrophy); 4 cases, or 14.3 per cent., retained only a minimum of vision. We are obliged to admit then that 71 per cent. of the eyes attacked by these syphilitic tumors are as good as lost.\*

The result is very much the same if we take into account only the 9 cases of gumma of the ciliary region. In 4 of the 9 cases the eye was entirely lost (by enucleation or atrophy), and 2 recovered with only a minimum of vision, that is, in 66.7 per cent. the eye was functionally lost.

What renders the chances of a good result especially unlikely is surgical intervention (puncture, etc.), and in proof of this take Ayres' six cases, of which only one escaped atrophy or enucleation.

I am convinced that in my case the result would have been far less satisfactory if I had allowed myself to be drawn into making a puncture of the anterior chamber, or an iridectomy on account of the increased tension which characterized the progressive course of the swelling.

I would then subscribe to the advice already given by H. Schmidt, never to touch a syphilitic tumor of the eye.

\* The result in the case reported by Nitot (vision very bad) and by Terson (atrophy) would only serve to render the prognosis in syphilitic tumors of the ciliary region still more unfavorable.

For if energetic anti-syphilitic treatment produces no effect, the bistuory would only greatly accelerate the destruction of the visual organ.

With your permission I would emphasize a fact which seems to be clearly brought out in my case. This is the relation to normal of the intra-ocular tension, previously more or less exaggerated, coinciding to the sudden growth of an intra-ocular gumma, which seems, in the absence of a perforation of the globe, to be a very good sign. For it announces the imminent breaking down of the tumor.

I would not wish to finish this paper without calling attention to the details of development and involution of gummous vegetations which, in this case, have been brought out in such a striking and instructive manner. We have been able to follow, step by step, the different phases of the tumor through the transparent cornea as through a glass. In this way we have found ourselves in a position for observation far more favorable than in gumma of the iris, for example, where the pigmentary richness of this membrane and the phenomena due to iritis, which are never absent in these cases, interfere with the clinical image. It is true that a severe inflammation of the iris existed in our patient, but nothing was easier than to separate that which pertained to the iritis from that which belonged to the tumor.

We have been able to see the gumma grow by the formation at its periphery of small hemispherical buds upon a smooth surface. As it increases in volume the different projections finally become united in a single mass, whose surface appears somewhat irregular, evidently on account of premature degeneration of the cells due to the insufficient vascularity of the tumor. Then all at once the entire mass breaks in pieces, not without considerable swelling during the last days of its existence, a swelling that probably has for its cause an absorption of the aqueous humor.

Metamorphoses more or less analogous to those which we have been able to study directly in our patient, ought to take place in gummata seated in other parts of the body,

and out of reach of the investigator. The swelling which immediately precedes the complete disintegration and resorption of the tumor seems deserving of especial mention. It explains, in my opinion, the odd fact, sometimes observed, that, in cases where a gumma produces paresis of the motor or sensory nerves, especially in intra-cranial gummata, an amelioration or cure due to anti-syphilitic treatment does not take place until after a transient aggravation of the said phenomena of compression.

BIBLIOGRAPHY.

(1.) DESMARRES. *Traite theor. et prat. des maladies des yeux*, t. ii, 1855, pp. 501.

(2.) WIDDER. Ueber Iritis syph. mit Rücksicht auf ihr Verhalten zur allgem. syph. Diathese. *Von Graefe's Arch. f. Ophth.*, t. xxvii, 2, 1881.

(3.) PANAS. *Traite des maladies des yeux*. Paris, 1894, G. Masson, ed., pp. 347.

(4.) ALEXANDER. Syphilis und Auge. Wiesbaden, 1888. I. F. Bergmann, ed., pp. 67.

(5.) FUCHS. *Lehrbuch der Augenheilk.* Leipsic u. Wien, 1889, F. Deutike, ed., pp. 312.

(6.) PANAS. Episclerite gommeuse. *Union medic.*, 1890, No. 72, pp. 865.

(7.) GALEZOWSKI. *Recueil d'opt.*, 1892, pp. 24.

(8.) FROMAGET. Episclerite gomm. syph. *Annal. d'ocul.*, 1893, Octobre.

(9.) BUSSE. Zur Casuistik der syphilitischen Tumoren des Ciliarkörpers. *Deutschmann's Beitr. zur Augenh.*, ii, 1892, pp. 16.

(10.) ARLT. *Krankheiten des Auges*, 1853, t. ii, pp. 87, et suiv.

(11.) H. SCHMIDT. Beitr. zur Kenntniss der Iritis syph. *Berl. klin. Woch.*, 1872, No. 23-24.

(12.) BARBAR. Ueber einige seltene syphil. Erkrankungen des Auges. *Dissert inaug.* Zurich, 1873, cite d'apres BUSSE.



- (13.) FUCHS. Syphil. Geschwulst im Ciliarkorper. K. K. Ges. der Aerzte, in Wien, seance du 11 Juin, 1886. In *Wien. Mediz. Presse*, 1886, No. 26, pp. 851.
- (14.) AYRES. Syphilitic Gummata of the Ciliary Body. *Americ. Jour. of Ophthalmology*, 1888, August, pp. 213-227.
- (15.) ALEXANDER. Neue Erfahrungen uber leutische Augenerkrankungen, Wiesbaden, 1895, pp. 18-19.
- (16.) SEGCEL. Irido-Choroiditis Gummosa and the Frequency of Syph. Iritis in General. *Archives of Ophthalm.*, t. ix, 1880, pp. 403.
- (17.) ARLT. *Loc. cit.*, pp. 67.
- (18.) MAUTHNER. In M. v. Zeissl-Lehrbuch der Syphilis, 5th edit., Stuttgart, 1888, chez F. Enke, pp. 618-619.
- (19.) ALEXANDER. Neue Erfahrungen, etc., pp. 19.
- (20.) CONNER. On Syphilitic Diseases of the Eye. Detroit, cite d'apres AYRES.
- (21.) CAMPART. Gomme de la region ciliare. *Bull. de la Clin. nat. Opht. des Quinze-Vingts*, t. iii, No. 4, pp. 56-57, 1885.
- (22.) VON HIPPEL. Fall von gummoser Neubildung in sammtlichen, Hauten des Auges. *Von Graefe's Arch. f. Opht.*, t. xiii, 1, 1867.
- (23.) ALT. On an Isolated Gummous Tumor of the Ciliary Body. *Arch. of Ophthalmol. and Otol.*, 1877, vol. vi, 1, 318.
- (24.) WOÏNOW. Fall von Gumma corp. ciliar. Compte rendu de la Gesellsch. Russischer Aerzte in Moskau, 1872, cite d'apres ALEXANDER.
- (25.) EDW. LORING et H. C. ENO. Syphilitic Gumma in the Ciliary Body. Proceedings of the Amer. Ophthalm. Society, 1874, pp. 175, cite d'apres AYRES.
- (26.) NITOT. These de Paris. 1880.
- (27.) A. TERSON. Les gummec precoces du corp ciliare. *Arch. Gener. de Medic.*, 1894, pp. 385-402.

## TWO CASES OF MASTOID OPERATION.

BY FRANCIS B. KELLOGG, M. D., TACOMA, WASH.

GENERAL remarks: The age of the mastoid operation is practically thirty-five years. Although suggested and very inadequately attempted in a few sporadic cases, extending back through one hundred years, it is only since 1860 that the operation has been recognized as a legitimate one, and undergone the development which has brought it to its present state of perfection. To-day it constitutes the most effective measure by which aural suppurations threatening the life of the patient can be brought under control. The following indications for its performance were given by Schwartze in 1873, and are practically those followed to-day in deciding upon an operation:

1. In acute primary and secondary inflammation of the mastoid, when after the use of antiphlogistic remedies, especially ice, the pain, swelling, and fever do not subside in a few days—eight at most.

2. In chronic inflammation of the mastoid, with recurrent swelling, or with existing abscess formations, or suppurative fistulæ, with gravitating abscesses along the side or toward the nape of the neck, in the external canal or toward the pharynx, even if there are no life-threatening symptoms.

3. In chronic purulent inflammation of the middle ear without any external evidence of inflammation of the mastoid, when there is any probability of symptoms developing that might cause dangerous complications as a result of the pus retention or cholesteatoma formation.

4. In otherwise incurable neuralgia of the mastoid.

5. As a prophylactic operation against fatal results developing from fetid middle-ear discharge, without any visible inflammation of the mastoid, and without signs of pus retention (*i. e.*, pain, chills, and fever) whenever careful examination proves that the seat of the purulent secretion is not limited to the tympanum.

Up to 1873 the operation had been performed only when the inflammation, acute or chronic, assumed such proportions as to threaten life.

One gets the impression from the fact that the operation is done upon the mastoid portion of the temporal bone, that the mastoid cells are the principal seat of trouble, and that the whole object of the operation is to reach and lay open these offending cavities. This is not generally true. The antrum mastoideum is the most important cavity in connection with this operation, and is always the goal of the operator. It is somewhat rare for the antrum to be affected without the involvement of the mastoid cells, but when the latter are affected it is generally caused by an extension of the process.

The course of events in a typical case is about as follows:

A middle ear suppuration, which then extends to the antrum through the aditus. The drainage of the antrum is poor; the conditions favor retention; caries is set up; the inflammation spreads to the mastoid cells; the bone becomes more and more affected, and finally necrosed, and the pus breaks through, either into the cranium, causing meningitis or cerebral abscess; into the lateral sinus, causing phlebitis, or through the outer plate under the scalp. The symptoms are those of pus retention, *i. e.*, pain, chills, fever, etc.

The object of the operation is two-fold; first, to liberate the imprisoned pus before it reaches a vital part; second, to lay open the accessory cavities that they may be accessible for treatment, and inter-communicate so freely as to prevent a recurrence of a similar trouble. This last object has of late been emphasized, and has led to a modification of the original operation, which was content to simply open



the antrum and secure communication between the artificial opening and the auditory canal. The latest operation, that of Stacke, chisels away the partitions between the cavities themselves, and then that between the united cavities and the external auditory canal. Then by splitting the skin of the external canal, and applying one flap to the roof of the cavity and the other to the floor, the intervening space becomes covered after a time with natural integument, and the whole can be inspected through the natural opening.

My first case is that of a young German lady, whose health had always been in other respects perfect. Seventeen years ago a splinter was thrust into the right ear, which was followed by supuration and perforation of the upper segment of the drum membrane, viz., Schrapnell's membrane. The discharge was not excessive, but suddenly she suffered quite a severe hemorrhage from the ear, and becoming anxious she consulted Dr. Hartmann of Berlin, who washed out the attic (that part of the tympanum lying above the plane of the roof of the external canal) through his very effective canula and told her she would soon be all right, as she soon was, not needing to consult him further. Her experience of the hemorrhage was repeated several times at intervals of a few years. It was always preceded by vertigo.

In 1890 she came under my treatment. The ear had begun to discharge, and the attacks of dizziness and nausea, which her former experience led her to attribute to the ear, had returned. I found in the ear an enormous mass of detritus. It took several sittings to get it softened and loosened, and when it finally came away the nausea was so intense that the patient vomited. The mass was a typical cholesteatomatous formation. It must have been as large as a hazel-nut, and was composed of a mixture of inspissated pus and epithelial *débris*. Its removal was followed by a purulent discharge, for which she was receiving treatment when she was obliged to return to Chicago. There she came under the care of Dr. S. J. Jones, who had previously treated the ear. The suppuration continued in spite of his efforts to check it, and having an opportunity to go South she embraced it. Under the sunny Southern skies the discharge ceased spontaneously.

She returned to Tacoma the following spring and remained

well until the summer of 1894. She then consulted me again, as the ear had begun to discharge. She again complained of vertigo, which was aggravated by pressure on the tragus. I felt sure there was another cholesteatomatous accumulation in the attic, and commenced syringing through the Hartmann canula to soften it preparatory to removal. As the mass was entirely concealed, and I could only assume its presence from the former experience and the present indications, I said little about it until it should be more in evidence, but continued my efforts at dislodgment. In the meantime an opportunity presented itself for her to make a visit to the seashore. The happy outcome of her visit South under what seemed to her similar conditions, led her to embrace this upon her own responsibility. Accordingly she suddenly disappeared for a month. At the end of that time she was forced to return. The symptoms, instead of abating, had become aggravated. Inspection of the ear showed a polypoid growth of the size of a small pea. Having removed this with the wire snare, I discovered that it sprung from the edge of the perforation, and moreover that the surrounding tissue had become so inflamed and swollen that it was no longer possible to gain access to the attic. Polypi continued to develop with rapidity, while the dizziness and nausea became steadily worse. It soon became evident that radical measures must be resorted to in order to remove the cholesteatomatous masses. It was therefore decided to open the mastoid, which was accordingly done. The bone was found sclerosed to an ivory hardness, and the antrum, which was encountered at a depth of fifteen millimeters, was found packed with cholesteatomata. These were washed out and communication established with the middle ear. It was some months before the discharge was entirely stopped.

The final condition was an interesting one.

The remnants of the membrana-tympani had disappeared, making it possible to pass a probe armed with a pledget of cotton into the attic, which had been enlarged to the size of a hazel-nut by the pressure of the mass. The slightest pressure with the probe upon certain spots in the roof of this cavity produced the most marked vertigo. I attributed this to pressure upon the brain through a film of bone, or perhaps upon the dura itself, as the probe passed a full half inch above the line of the external canal.

The source of the persistent discharge following the operation was finally located at a point in the roof of the enlarged attic. It was of small size, and was discovered in this way: In cleansing the cavity I used a dental probe armed with a dossil of cotton. The terminal half inch of the probe was bent upward at an angle of forty-five degrees, and two and one-half inches from that point another bend inclined the handle downward at about the same angle. Inserting the probe into the middle ear, and depressing the handle, the cotton was pushed upward almost perpendicularly; when this was done, and the cotton made to hug the proximal wall of the attic, it touched, when it reached the roof, a small point of granulating tissue, as evidenced by a slight blood stain which it would receive at this point. After I discovered this point I stopped the discharge in a few days by applying directly to it powdered alum upon the probe as described.

My second case was that of a small colored girl of three years. The right ear had been discharging for two or three weeks following an attack of influenza. I found the whole auricular region diffusely swollen, with a point of deep fluctuation over the mastoid. Examination with the finger disclosed also the presence of adenoid vegetations in the vault of the pharynx. The temperature was  $101^{\circ}$  and the pulse 140. I applied Leiter's coil to the ear and made an appointment to operate upon the adenoids the next morning, at which time a large mass was removed with the Gruber curette.

I gave her a couple of days to recover from this, and then operated upon the mastoid, as there was no improvement in the symptoms. The usual post-auricular incision was followed by a gush of pus. The whole mastoid portion of the bone, including the posterior wall of the auditory canal, was broken down. The curette was the only instrument needed to complete the operation. Even with this the excavation was so deep that I did not feel justified in removing all the softened bone which would have come away. Having scraped away all that I considered safe, I then split the integument of the external auditory canal posteriorly from the middle ear to the orifice; then by means of a cross incision at the latter point, I made two flaps after the method of Stacke; I then packed the ear, pressing the flaps against the upper and lower walls, respectively, of the cavity. I also inserted a drainage tube in the mastoid opening.



This was about eleven o'clock in the morning. At three o'clock in the afternoon I received a message by telephone that the child had had a severe chill. I found her with a temperature of  $103^{\circ}$ , and pulse of 150. This naturally gave the case a grave aspect, and made me fear lest I had used my curette too vigorously, and the prompt development of symptoms of meningitis did not tend to lessen my anxiety. The temperature continued to a range between  $103^{\circ}$  and  $104^{\circ}$  during the next week, and the pulse from 150 to 160. There was great restlessness. Pupils became contracted. After the second day she became apathetic. While in this condition the slightest disturbance would bring forth the characteristic cerebral scream. There was some twitching of the muscles, but it did not amount to a convulsion. I gave the case up for lost, but still continued to do everything in my power to bring it through. I applied cold to the head, kept the patient absolutely quiet, and gave the indicated remedies. The mother proved a most efficient nurse and followed my every direction. The ear was irrigated daily, and in a few days the discharge had almost ceased. After a week of anxiety and assiduous care I was rewarded by seeing a change for the better. From this point the case went on to complete recovery. The form of the external auditory canal, as a result of the method of operating, was materially changed, presenting an enlarged cavity continuous with the middle ear. The mother now states that the child seems to hear as well with that ear as with the other.

## ACCOMMODATION AND CONVERGENCE.\*

BY ROBERT G. REED, M. D., LOUISVILLE, KY.

IN the following consideration of accommodation and convergence, organic changes of a pathological nature will be excluded, as will also that great anomaly of refraction—astigmatism.

Perfect binocular vision depends upon the coincidence of two points, viz., the point of accommodation and the point of convergence. On the ease with which this coincidence is maintained depends the comfort of vision.

The location of the point of accommodation is governed by the elasticity of the crystalline lens and the amount of muscular energy manifested by the ciliary muscle.

The location of the point of convergence is decided by the power the extrinsic muscles of each eye have of rotating the eyes toward a median line.

In emmetropia, with perfect innervation of the muscles, extrinsic and intrinsic, these points always coincide. That is to say, if the eyes accommodate for a given point, they also converge sufficiently to bring the visual lines to a junction at the same point.

Considered simply as an optical instrument, the eye is not geometrically perfect. If the eyes of a given subject were geometrically perfect in form, and the development, attachments, and innervation of all the muscles perfect, then for every degree of accommodation there would be a corresponding convergence. Deviations, such as hyperopia and myopia, lead to an inquiry into the mechanism by which the coincidence of these points is maintained in ametropia.

\* Read before the State Medical Society, Piqua, O.

This inquiry will necessitate a study of the arrangement and offices of the nerves centers controlling the mobility of the ocular apparatus. These centers are divided according to their several offices, into three groups or ranks, viz.:

First. Those of motion.

Second. Those of association.

Third. Those of volition.

Those of the first group are situated on the floor of the fourth ventricle. From the center of these arise the trunks of the oculo-motor (third), trochlear (fourth), and abducens (sixth), nerves, and to them is referred the power of directing the ocular apparatus toward external objects. The most anterior center of this group is the nucleus of the oculo-motor nerve. This nucleus is made up of separate segments, each having control of one of the muscles supplied by the oculo-motor nerve. The anterior segments of this nucleus are supposed to control the ciliary muscle, and the sphincter pupillæ; and next to them is the one for the control of the internal rectus; while still farther back lie the segments in control of the rest of the muscles supplied by this nerve. Almost directly back of this great nucleus lies the center in control of the trochlear nerve, which supplies the superior oblique muscle. Still farther back, and somewhat separated from these two centers, lies the center in control of the abducens nerve, which supplies the external rectus.

Each nucleus of the above group is not only connected with its fellow of the opposite side, but also with other nuclei, as is shown by the connection existing between the abducens and oculo-motor centers.

Presiding over these centers is the second group, or association centers. These have a two-fold function, viz., excitation and inhibition. It is the members of this group which control the amount of energy manifested by the nuclei of the motor groups. In other words, they act as the governor of the oculo-motor apparatus, in the co-ordination and association of the ocular muscles.

These association centers, along with the first group, are



presided over by the third class, or centers of volition, located in the cortex of the brain. An appreciation of the function of this apparatus is very important, and gives the key to many functional disorders of the ocular muscles. For instance, an image is thrown upon the periphery of the field, and the impression is transmitted to the brain. In order to secure a more perfect impression, it is necessary for the eyes to move to such a position, as would bring the image upon the macula of each eye. This is done by the command of the centers of volition issued to the centers of motion and association, the result of which is rotation, accommodation, and convergence of the eyes.

In ametropia, the process of bringing these points to a coincidence is much more complex than in emmetropia.

In emmetropia the impulse would be proportionate, *i. e.*, a relative amount of accommodation and convergence. But, should the eyes be hyperopic, and the impulse continue in this proportion, the point of convergence would be brought nearer the eyes than the point of accommodation, and the image would be indistinct.

This result is avoided by the inhibitory function of the second order of centers, exerted on those segments of the oculo-motor nucleus (the posterior), in control of the extrinsic muscles supplied by that nerve. That is to say, that while the muscles of accommodation are supplied with nerve force sufficient to focus the image on the maculæ, the nerve force to the converging muscles is held in abeyance to such an extent that the points coincide. Hence, it is said to be a *tendency to over-convergence*.

In myopia the nerve supply is reversed; the inhibitory function is exerted over the anterior segments of the oculo-motor nucleus, which control the muscles of accommodation, while the muscles of convergence are exerted sufficiently to cause the points to coincide.

In aniso-metropia, the nerve impulse to each eye may differ in degree, or be reversed, as the case may be (anti-metropia being included in aniso-metropia).

A careful study along the above lines gives much assist-

ance in distinguishing functional from inherent heterophoria ; and also cases that will be relieved by the correction of refractive errors alone, from those that will require operative or other treatment.

By functional heterophoria is meant a heterophoria due either to weakness or spasm of a set of muscles. And weakness and spasm may exist in the same set of muscles at the same time. For instance, weak interni are supposed to cause exophoria, and such is the case in myopia and low degrees of hyperopia ; but a high degree of hyperopia may call forth nerve energy to the converging muscles, beyond the power of the inhibitory function to control, and spasm is produced. In the latter case the Maddox rod will show an esophoria, while the power of the interni may be proven to be far below par, by the strength of prism, base out, which they are able to overcome ; some not being able to overcome more than two or three degrees more, base out, than the externi of the same eyes will overcome with base in.

Hence the necessity of determining the nature of the heterophoria in every case, which can only be done by a careful measurement and record of the heterophoria, and also the strength of each muscle, measured by prisms. A thorough mydriasis should then be produced, the static refraction of the eyes determined, and the proper refractive correction given. After this correction has been worn long enough for the nerve supply to adjust itself to the new order of things, another test for heterophoria and measurement of strength of the muscles should be made and compared with the first record.

If in this test it should appear that the muscle balance is normal, and that the muscles formerly weak have regained their strength, the heterophoria was simply functional, and due to refractive error.

But should this test disclose a marked degree of heterophoria still remaining, it is due to muscular weakness or to mal-attachment of one or more muscles.

If it is caused by the former, general measures and muscle exercise may be depended on for relief, but if caused by the latter condition, compensating prisms or surgical measures are the only means by which relief can be given.

## CHRONIC LARYNGITIS AND ITS TREATMENT.

BY CHAS. E. TEETS, M. D.

WE have four forms of chronic laryngitis: Chronic catarrhal laryngitis; laryngitis sicca; laryngorrhea; hypertrophic laryngitis or chorditis tuberosa.

On examining the larynx of a patient suffering from the first form, the first thing noticed would be the hyperæmic condition of the parts. This may be general or circumscribed, shading off gradually into the color of the surrounding tissue. The vocal bands may present only a pinkish appearance, or they may be as red as raw beef. We find the epiglottis also congested, and distended capillaries coursing over the vocal bands and posterior surface of the epiglottis.

Stringy mucus is seen adhering to the vocal bands, and, in phonation, the bands are relaxed; the edges, which are thickened, not coming accurately together, but leaving an elliptical opening. This is due to paresis of the laxors of the vocal bands—the thyro-arytenoid muscle—through inflammatory infiltration.

Not infrequently slight erosions are noticed upon the vocal bands, but oftener they are to be found between the arytenoid cartilages.

In laryngitis sicca, or the dry form, we find the vocal bands congested; and, adhering to them, dry crusts of mucus. P. McBride reports that Baginsky observed a laryngitis sicca extending also into the trachea, emitting an offensive odor.

Owing to the adhesive character of these crusts, it is



sometimes almost impossible to dislodge them except after repeated hawking or coughing. Thus they may remain for a long while clinging to the walls of the larynx, and decomposition of these crusts taking place, give rise to a fetid exhalation not unlike that from fetid nasal catarrh. This is an aggravated form of laryngitis sicca, but Cohen has named it fetid chronic laryngitis. When these crusts drop off we often find the mucous membrane beneath eroded or ulcerated and prone to bleed, and Cohen has named this ulcerated chronic laryngitis.

Laryngorrhea occurs most frequently among vocalists. The larynx looks almost normal, but the mucosa throws out an excessive amount of secretion whenever the patient attempts to sing. This profuse discharge seems to come mostly from the sacculus laryngis, which is a narrow membranous cavity, or sac, between the ventricular bands and the inner surface of the thyroid cartilages. This sac extends upward and backward to the upper border of the thyroid cartilage, and in some instances has been traced as far upward as the base of the tongue. In these sacs will be found sixty or seventy small follicular glands which open into the sacculus laryngis. These openings or glands discharge into this sacculus laryngis the secretion which is afterward discharged upon the vocal bands, the surface of which it is intended to lubricate.

Laryngorrhea is due principally to increased activity of these glands.

Chorditis tuberosa, or hypertrophic laryngitis, is recognized by the granular appearances of the vocal bands. The surface presents a nodular appearance, with unevenness of the edges. Some authorities class this as a separate disease, but I consider it an aggravated form of chronic laryngitis.

In all forms of chronic laryngitis the voice is usually hoarse, varying degrees of hoarseness being observed, and sometimes amounting to complete aphonia. Constriction of the throat and a feeling of dryness of the mucous membrane is a common complaint. The exertion of the parts

produces fatigue. This may be general, or confined to the larynx. Patients sometimes become exhausted after using the voice for a few minutes.

Cough, provoked by a tickling and an itching sensation in the throat, is present in the majority of cases. It may be moist, with a scanty or profuse expectoration; or dry, with little or no expectoration. The etiology of chronic laryngitis may be sudden or unaccustomed exposure to cold; or repeated attacks of acute or sub-acute laryngitis. Overstraining the vocal bands in screaming or shouting, especially in the open air; prolonged and excited talking are sometimes followed by laryngitis.

It is occasionally due to foreign bodies in the larynx or pharynx; or to the incautious use of instruments in the throat, and to imprudent cauterization of the larynx. It may be excited by local irritation in the immediate neighborhood of the larynx, or at a distance from the larynx—such as obstructions of the nasal cavities, or anything in the nose or naso-pharynx that will produce irritation.

Excessive use of tobacco or alcoholic stimulants are undoubtedly an exciting cause. The disease is sometimes a sequel of one of the eruptive fevers. Phthisis, syphilis, or growths of any variety may set up a chronic inflammation.

In the treatment of chronic laryngitis, the first thing to do is to remove the cause, if possible. The removal of the cause, when located in the nasal cavities, such as hypertrophy of the nasal mucous membrane, ecchondroses, exostoses, spurs, ridges, polypi, and in fact anything that produces nasal obstruction or irritation, will often effect a complete cure of the laryngeal disturbance without further treatment. Dr. Stewart\* reports two cases of aphonia from adductive paralysis of one vocal cord, where after various methods had failed, the removal of the turbinated bone resulted in a cure.

The cause may be found in some cases to be due to a foreign substance lodged in the pyriform or glosso-epi-

\* *Lancet*, London, October 13, 1888.

glottic sinuses. It should be removed with the forceps, and an application of nitrate of silver, forty grains to the ounce, made to the sinus. There may be discovered in one of these sinuses an ulceration, this being the starting point of an inflammation. After the sinus has been carefully wiped out, the ulcer should be touched with a solution of nitrate of silver, sixty grains to the ounce, or with the sulphate of copper in the same proportions. The patient must avoid all exposure to dampness and cold, and excessive use of the voice, especially in the open air, must be prohibited. Rest to the voice is necessary, and, in some cases, I insist upon *absolute* rest, the patient making himself understood by other means than the voice.

The use of tobacco and alcoholic stimulants should be discouraged—they tend to aggravate the symptoms.

Constitutional remedies will aid us; but, in addition, repeated applications of some stimulating substance will be necessary before the disease can be cured. The various substances employed for this purpose may be applied in the form of powder or solution. The application of liquid remedies to the larynx may be made by brush or cotton probang. Where oily solutions are used, applications may be made by spray.

Astringent solutions should be of very moderate strength at first; gradually increasing the strength according to the susceptibility of the patient. The solutions I have found to be most efficacious are as follows: Chloride of zinc, five to thirty grains to the ounce; if I use the nitrate of silver, I commence with a solution of ten grains to the ounce, gradually increasing up to sixty grains.

Iodine may be found efficient in some cases, especially where there is much thickening.

Thujaole will be found to be a most excellent application for chronic laryngitis, especially in chorditis tuberosa and laryngorrhea, or where there is much hypertrophy. Excellent results may be obtained by applications of calendulol, but should be used only in those cases where there is not much thickening of the cords. Aluminol, a



new soluble preparation, has given astonishing results not only in the acute, but chronic form of laryngitis, being especially useful in the first two forms. It is used in the five or ten per cent. solution, either with the brush, cotton probang, or spray. It has the advantage over other solutions, such as the chloride of zinc and Lugol's, in that it is less unpleasant to the patient, and at the same time more rapid in its action upon the diseased tissue.

One of the above solutions may be used for the first few weeks, followed by applications in the form of powder, thus: boric acid and iodoform, equal parts; boric acid and alum, equal parts; boric acid, 3ij; zinc sulphate, 3j; sugar of milk, ʒj, tannin, gr. xv. An excellent application, in powder, is plantago, calendula, and boric acid. The boric acid with calendula, and boric acid with plantago, are obtained from the Homeopathic Pharmacy, and mixed together in equal parts. This, and the thujaole, makes the best application for chronic laryngitis I have ever used. Powders are especially useful in laryngitis sicca. For this form of laryngitis, Gottstein recommends chlorate of potassium (twenty grains to the ounce), followed by nitrate of silver; but I have found that the above gives results more satisfactory.

These applications should be made by the physician every other day, and the patient should be furnished with the thujaole for home use.

Owing to the obstinacy of chorditis tuberosa, in some cases it will not yield to the above treatment. In such cases I would advise the treatment recommended by Sajous: touching small areas of the cord with chromic acid at intervals of several days.

In addition to the above treatment the following remedies are the ones most frequently used: argentum nitricum, causticum, hepar, iodine, bryonia, kali bi., kali iod., phosphorus, silphium laciniatum, spongia, and thuja.

*Argentum nitricum.*—Thick tenacious mucus in the throat, which is discharged only after frequent hawking or coughing.

Sensation in the larynx when swallowing as if a splinter had lodged there.

Burning and dryness in the larynx. Rawness and soreness in deglutition and when coughing. Partial aphonia, especially indicated in the dry, fetid, and ulcerative form.

*Bryonia*.—Dryness of the pharynx and larynx. The parts are swollen. The voice is rough and hoarse, the mucus in the larynx tenacious. A sensation as if something was crawling in the larynx, which produces a dry cough. A feeling of constriction at the upper part of the trachea, with slight pain when taking a deep breath, worse when coming into a warm room.

*Causticum*.—Great fatigue from talking, the laryngeal muscles refuse their service, can speak only in a whisper. (1) "When attempting to sound a high tone, the voice gives out or ends in a squeak. Lack of co-ordination (co-operation) of the vocal bands; a frequent symptom after the subsidence of acute or subacute catarrh. Mucous lining anæmic; vocal bands gray or dingy in appearance, and are seen to come in contact, but separate before a tone is produced, the muscles being so weak that the expiratory current forces the ligaments asunder. Here causticum is the true toner-up." \* Hoarseness, worse morning and evening, rawness and tickling in the throat.

The mucus collects in the throat and can be raised only after repeated coughing or hawking, and sometimes the patient is obliged to swallow it. For parietic hoarseness due to paresis of the tensors of the vocal bands, we have no remedy that will compare with causticum.

*Hepar sulph*.—Hoarseness, roughness in the throat, the larynx sensitive to cold air. Stitches in the throat, extending to the ear, worse when swallowing. Smarting, rawness, and scraping in the throat, the throat feels constricted, sensation as if a plug was in the larynx. Rattling of mucus in the throat, air passages seem to be clogged with mucus. "Difficult expulsion of scanty, tenacious mucopurulent secretion. Especially useful when the catarrh is

\* Ivins' "Diseases of the Nose and Throat."

aggravated by overuse or strain of the vocal apparatus." \*

*Iodine*.—Inflammation of the larynx and pharynx, with a burning or smarting pain. Tightness and fullness about the larynx and trachea. Hoarseness, soreness, sharp pains in the larynx; the pain being confined to one spot, which is worse on pressure. Spasmodic cough, expectoration scanty. Especially useful in the hypertrophic form. "One of the strong indications for the drug is that, although the patient eats heartily he grows thinner." (Ivins.)

*Kali bi*.—Hawking of much thick, tenacious, stringy mucus in the morning. The laryngeal and pharyngeal wall and vocal bands dark red, glossy, puffy, showing ramifications of dilated capillaries. Rough, hoarse voice, spasmodic cough.

*Kali iod*.—Itching and dryness of the throat, which produces a dry, irritating cough. Pain and constriction in the larynx. The vocal bands red and rough as in the hypertrophic form of laryngitis. "It has a special relation to cases depending on syphilis, scrofula, and rheumatism." \* (Dr. George Moore.)

*Phosphorus*.—Hoarseness, with cough and rawness in the larynx. Pain is worse toward evening and when talking. Throat very dry day and night, and feeling as if there was cotton in the throat. The expectoration scanty and frothy.

*Spongia*.—Voice gives out when singing or talking. Engorgement and thickening of the mucous membrane, and a feeling as if a plug was in the throat. Larynx sensitive to the touch and when turning the head. A sensation as if there was a stoppage in the larynx and trachea.

Burning and stinging pains in the throat. Larynx pains when talking.

*Silphium laciniatum*.—Scraping, tickling, and irritation in the larynx; the tickling and irritation extends to the pharynx, and sometimes the naso-pharynx. Engorgement and thickening of the mucous membrane, which is seen extending into the trachea. Constriction of the throat, with

\* Ivins' "Diseases of the Nose and Throat."



constant desire to raise. Spasmodic rough cough, attended with expectoration of yellow mucus.

*Thuja*.—Sensation as if a skin was in the larynx. The cords are covered with minute whitish elevations. The throat is dry, rough, and feels constricted. Dry cough. The best remedy for chondritis tuberosa and laryngorrhea.

In conclusion, I want to emphasize three points:

First, the thorough examination of the larynx, pyriform and glosso-epiglottic sinuses, pharynx, and nasal cavities before commencing treatment.

Second, the removal of all obstructions from the nasal cavities.

Third, that chronic laryngitis cannot be treated successfully by internal medication alone.

## AN OPERATION FOR ADVANCEMENT OF THE RECTI MUSCLES.

BY CHARLES C. BOYLE, M. D., NEW YORK.

IT is a difficult matter to devise an entirely new operation for the advancement of one of the recti muscles ; the best one can do is to improve, or, we might say, make some change in the technique, which may seem to the operator an improvement over some other method, and it is possible that every step of the operation may have already been previously performed by someone else. The operation I am about to describe seems to me to include the best features of the various operations that are in vogue for this purpose. It might be termed the "composite operation," as it includes features of most of the others.

It is especially applicable to those cases where tenotomy has previously been performed for strabismus ; the resultant effect being so great that the eye deviates in the opposite direction. In some cases of this kind, which I have operated on by some of the various methods, I have found that the stitches would cut through, and, as a consequence, I would gain little by the operation.

To avoid this I operate in the following manner: I first make an opening in the conjunctiva at the point of attachment of the tendon, and parallel to the muscle ; this opening being sufficient to pass the strabismus hook under the muscle, close to its insertion, the point of the hook showing under the conjunctiva on the opposite side of the muscle, at which point I then make a counter opening, passing one point of the scissors into the opening under conjunctiva

and adherent capsule, cutting as far back along the border of the muscle as is necessary to obtain the desired effect. The same procedure is repeated along the other border of the muscle. After this has been done, the muscle is raised up by the hook, and whatever attachments there are between the under surface of the muscle and the sclera are divided with the scissors. We now have the muscle free below, and the upper surface covered by the conjunctiva and the capsule, which forms a more secure anchorage for the thread than the muscle alone. I then take a thread, with a small curved needle at each end, and, going as far back as judgment dictates, pass one of the needles from below upward through the body of the muscle, capsule, and conjunctiva, coming out near the same edge as was entered; after drawing the thread through a convenient length, the same needle is passed through from above downward, the point of entrance and exit being close to the opposite edge of the muscle, drawing the thread through so that the two ends with the separate needles are the same length. The next step is to cut off as much of the tendon and muscle as is necessary to obtain the desired shortening; this can be done either before or after separating the muscle from its attachment to the sclera. I prefer the former, as in this way you can better estimate the effect. After this is done, I put a vertical suture in the conjunctiva in front of the point of insertion of the tendon, entering it about on a line with the lower edge of the cornea, and coming out above, at a point corresponding to the upper corneal border; I then tie the two ends of this suture quite snugly over the intervening conjunctiva; this is similar to Prince's suture; but instead of using it as a pulley, I use it as a stay, as you might call it, to prevent the suture that holds the muscle, which is now to be put in, from cutting through. After reaching this stage of the operation, I take one of the needles that is attached to the thread in the body of the muscle, and pass it under the remains of the insertion of the tendon at either its lower or upper border, going through it along under the conjunctiva, and



coming out as close to the edge of the cornea as practicable, back of the stay suture ; the other needle is passed the same way through the opposite edge of the tendinous insertion, coming out in the same manner a short distance from the other. After having my assistant catch the muscle up with the forceps and drawing it as far forward as possible, I tie the suture with a double knot, and then taking one of the needles, which is still threaded, and passing it over the stay suture into the tab end of the muscle, I draw that in place, and keep it there by tying the two ends of the suture together over the top of the stay suture. After this is done, if it is an extreme case of insufficiency, I perform tenotomy of the opposite muscle. The operation is now complete, and both eyes are bandaged.

## IRITIS PAPULOSA.

BY M. RUTH WORRALL, M. D., NEW YORK.

ON September 6, 1895, Miss L. H., æt. twenty, presented herself for treatment in the clinic of Dr. N. L. Macbride at the New York Ophthalmic Hospital.

In the left eye was observed a yellowish-red tumor, at the periphery of the iris at its external inferior boundary ; also posterior synechiæ at four points. There were also posterior synechiæ in the right eye.

The trouble in the left eye she said first began about a month before, the supposed cause being a "cold" contracted at Manhattan Beach. This was treated at a drug store, and was thought to be cured, but the week previous the inflammation had returned.

About three months before her appearance at the hospital the right eye had been affected, but healed after a little while.

History showed sexual intercourse six months previous. Denied having chancre or any manifestation of syphilis save the eye lesion.

She refused to enter hospital then, but the eye becoming so much worse, she finally, on September 12, entered the hospital ward.

After she had been in the hospital a few days the rash of secondary syphilis appeared on chest and arms ; being, as far as we could ascertain, the only symptom of secondary stage, excepting the eye trouble.

Under anti-syphilitic treatment the eye improved very much, the nodule being absorbed ; the patient then passing from observation.

In looking up the literature of syphilitic iritis, nearly every author said iritis parenchymosa due to syphilis might occur in the earliest stages, yet the variety in which the

syphilitic nodules appear, nearly all authorities agree in placing in the *late* secondary stage. Max Knies giving an exception, but such exceptions being so exceedingly few and far between, he calls particular attention to it in the following words :

“ I have recently seen a typical iritis papulosa as the first and sole secondary symptom, three weeks after a hard chancre, rapid recovery following anti-syphilitic treatment ; two months later, syphilitic eruptions of a severe ulcerating form appeared upon the skin.”

The same author says it is only in fifteen or twenty per cent. of the cases that iritis appears in a manner characteristic of syphilis.

The term iritis papulosa is probably more correct than iritis gummosa, in view of the stage of syphilis in which iritis is generally found, but there is really only a quantitative difference between a syphilitic papule and a gumma.

Dr. Schweinitz also differentiates between iritis papulosa and gummosa, but he seems to affirm that there is more than a quantitative difference, for he says the iritis gummosa is in the tertiary period, and, disappearing through fatty degeneration, leaves behind a permanent scar or atrophy of the iris. He cites Alexander as his authority.

Thus we see he makes a differential diagnosis not only by the period of its occurrence, but by its results ; the papules being absorbed without undergoing degeneration and leave no trace behind, while the gummata leave scar and atrophy in their wake.

Berry says : “ Iritis is for the most part a late secondary manifestation, making its appearance as the others are fading or after they have altogether disappeared. Sometimes, however, it runs its course contemporaneously with the other secondary symptoms, and may even be the first to appear.

“ In some cases inflammatory changes in the iris, which are usually of a plastic nature, bear strong evidence of their syphilitic origin.” He then goes on to describe the nodules, calling them gummata ; continuing, he says :



"Gummatous iritis does not, as its name might imply, belong as a rule to the tertiary period of syphilis, but to the secondary, although, on the whole, appearing later than the more common form."

Norris and Oliver say: "The variety [of iritis] accompanied by the formation of gummata is found at a later period of the general disease; that is, when the secondary symptoms are subsiding or after they have passed off."

Juler says: "Syphilitic iritis comes on as a secondary symptom, generally appearing some weeks after the occurrence of the rash. Gummous nodules are sometimes seen."

Swanzy says: "In syphilis late in secondary stage, a form of iritis occurs which may be always recognized as syphilitic." He then goes on to describe these papules.

Williams states: "Iritis may show itself in primary, usually however in secondary or tertiary stages, or in the inherited form of syphilis." But he speaks here of iritis in general, not assigning any one variety to any special period of the disease.

Schweigger is authority for the following: "Iritis syphilitica is one of the earliest symptoms of secondary syphilis, and is generally observed simultaneously with condylomata or syphilitic roseola." Here again one does not know whether is meant iritis parenchymosa, papulosa, or gummosa.

Almost all authorities agree in taking the single nodule as being undoubtedly syphilitic; only about two authors consulted even suggesting it might possibly be non-specific.

There is generally no known exciting cause, although patients will often assign various and often peculiar reasons—it seems to be part of the general disease. One patient I heard explain the appearance of syphilitic stains on his leg, by stating he had worn yellow stockings; why it did not stain the other leg, or why the stain should be circumscribed as it was, he did not deign to tell.

Berry, alone of all the authors consulted, makes any

attempt to try and explain the occurrence of syphilitic iritis. He says: "It is of course possible that in some, perhaps many cases, there may be a special vulnerability of the iris, so that slight and often unnoticed temperature changes may be the immediate means of setting up iritis." Leber's view that the inflammation is determined by the accidental entanglement in the capillaries or smaller vessels of the iris, of minute coagula containing the specific virus, affords a better explanation both of the comparative infrequency of iritis in syphilis and of its frequent unilateral nature, when it does occur. No anatomical proof has yet, however, been given of its correctness.

The histological elements of the papules are considered by Virchow to be identical with gummata occurring elsewhere.

## THE PREVENTION OF SOME FORMS OF THROAT DISEASE.

BY E. ELMER KEELER, M. D., SYRACUSE, N. Y.

IN this paper I propose to give what are, to the best of my judgment, some means whereby many severe forms for throat disease may be prevented, and as prevention of throat diseases means, in many cases, the prevention of lung diseases, the far-reaching character of my subject becomes evident.

Preventive medicine, in its many departments of sanitation, quarantine, asepsis and antisepsis, has gained many medals of honor in the past ten years, during which time it has materially lessened our death rates from nearly all diseases, and made life more worth the living to all civilized humanity. An epidemic of typhoid fever twenty years ago did not have the meaning it does to-day. Then it was a mysterious dispensation of Providence.

Now, it is interpreted as due to criminal neglect or ignorance, or both, and the criminal is sought out; the source of infection is removed, and the epidemic ceases, as does a fire when no more fuel is placed upon the grate. And we could even prevent its future rekindling were we able to destroy all sources of infection.

In relation to throat diseases it is especially true that the proper amount of prevention is worth far more than many pounds of cure.

It is needless to say that the majority of throat diseases commence in some form of what is popularly called a "cold."



To prevent "catching cold" is to reduce the number of such cases more than one-half.

An ordinary cold develops in either the nasal cavities, the pharynx, or the larynx.

If, in the first-named locality, the patient suffers from dryness and burning in the nose, with a heaviness about the frontal region, followed by a watery discharge, which gradually becomes muco-purulent in character.

The systemic disturbance may be, and generally is, slight, unless there is an extension of the inflammatory process to other parts.

This extension, however, frequently results, and then we may find involvement of the antrum of Highmore, the conjunctiva, and the Eustachian tubes.

If the pharynx is the point attacked the tonsils usually become involved, and there will be systemic disturbances, more or less severe, with a marked rise of temperature. The tonsils are swollen and painful, and the pharyngeal muscles extremely sore, so that deglutition is almost impossible. The throat looks red and dry, and feels hot to the patient. This painful condition will frequently continue for several days, in spite of prompt and vigorous measures for its relief, and finally there is more or less pus formed in some portion of the tonsil.

This burrows its way out, or there is an incision made to remove it, and there is an end of the present attack. This may be repeated an indefinite number of times, in fact, each attack seemingly invites another. Varying the amount of swelling, of tissue involved, and resultant pus formation, and we have a picture of every variety of tonsillar inflammation, from the mildest form to genuine quinsy.

While not dangerous, there is frequently a vast amount of suffering and loss of time produced by what is called an ordinary attack of "inflamed sore throat."

In the third instance the pharynx, tonsils, and surrounding tissue partake only slightly in the inflammatory process, while the larynx is especially affected.

This form is especially met with in singers and public

speakers, producing the well-known clergyman's sore throat, although, so far as my experience goes, it is improperly so named.

I remarked the fact while treating a lawyer friend of mine that I found many more of his profession suffering with this trouble than among the clergy, and his reply, perhaps, furnished the explanation.

"Why!" he said, "I talk more in one day than any minister in this city does in seven."

In aggravated forms the swelling and dryness of the mucous membranes are very distressing, seemingly almost closing the larynx, producing dyspnœa and irritable cough, besides the great inconvenience resulting from the serious interference with phonation.

This is the pseudo-croup of childhood, and the acute laryngitis of later years.

This, hastily stated, is the condition found in the majority of the cases of "throat trouble" claiming our attention. In each of these conditions the patient seeks our services year after year.

Frequently they become unable to attend to their ordinary occupations on account of the frequency of such attacks, or else the chronic forms appear.

Chronic laryngitis is the most frequently met with of any laryngeal trouble. It is characterized by injection over the ventricular bands and ary-epiglottic folds; frequently from weakness of the thyro-arytenoideus muscle there is imperfect approximation of the vocal cords whether the true cords are involved or not.

And now I would raise the query—Can we do nothing more than to treat these cases symptomatically?

Candidly are we not doing but half our duty when we simply prescribe for such patients?

Should we not only treat existing conditions, when called to an acute attack, but endeavor to gain the patient's co-operation in an effort to prevent its repetition, thereby reducing the chances of chronic disease and the possible involvement of bronchial and pulmonary tissues?

I believe much may be accomplished in preventing the inception and repetition of the common forms of nasal, throat, and bronchial diseases, and in that direction I would now turn your attention.

In the line of preventive treatment, I would give first place to the proper sanitary surroundings of our homes as regards heat and ventilation.

In spite of hygienic literature and advanced instruction in various channels, it remains a deplorable but undeniable fact that seventy-five per cent. of the houses, and especially the flats of to-day, are built with little regard for the laws of health. Architectural effect, personal convenience, and economy of space are given the preference, while the importance of supplying every room with an adequate amount of pure air and the proper degree of warmth is neglected.

Not half the modern houses have a single room so ventilated and warmed as to be desirable as a sick chamber, and yet do we not need pure air and suitable temperature even when well, in order to remain so?

This is a subject well worth the frequent attention of our "People's Bible"—the public press.

Let the masses know how each room should be warmed, and how pure warmed air can and must be obtained in order that they and their children may enjoy good health. The future of our country, we are continually saying, depends upon its thousands of happy homes, and while a house does not make a home, still a home should always be established in a healthy house.

There is generally enough heat in our houses; very few, excepting the pauper classes, really suffering from deficient heat, the trouble usually being an over supply and unequal distribution. One part of a room being above 80°, another 60°.

In short, our rooms are *heated*, not *warmed*.

Then consider the exposure following the change from this superheated and dried atmosphere to the open air of winter. Any of our patients interested in horticulture



would little think of removing a tropical plant from Florida to northern Maine, expecting it to survive the change.

Yet every day in winter they are subjecting themselves and children to changes even greater.

The sight is common of children with limbs imperfectly clothed coming from rooms with a temperature of 80° and over into that of near zero. This sudden change cannot fail to produce an enormous shock.

The terminal nerve fibers controlling the caliber of the capillaries of the skin are affected at the most exposed parts. These capillaries contract, forcing a large proportion of their blood away from the surface and toward the center of the body. This in its turn produces an increased and unnatural blood supply of the deeper tissues, favoring congestion and inflammation.

The nose and throat stand as it were guard over the lungs, and usually suffer the results of such sudden changes, although pulmonary inflammation may result.

This frequent change from the indoor temperature to that outside cannot of course be avoided, but we may escape much of its danger if the temperature is never allowed to exceed 70° in our living rooms. A change from 70° to that of the average winter weather is much the same as the difference between September and January, while if I am not mistaken, our patients more often step from July into midwinter each time they leave their fire-sides.

By careful observation I am led to the conclusion that each degree of heat in our houses above 70° adds an unnecessary amount of exposure to all those dwelling in the climate of our Northern States.

Second in importance as preventing throat and lung troubles, I would place proper clothing of the body.

This may be divided for our discussion into inner and outer clothing.

The inner clothing should be such as will keep the surface of the entire body dry and warm.

Wool meets the requirements of a proper under-garment

most perfectly, being able to preserve the natural heat of the body, and if finely woven prevents the cold from reaching the surface. I insist upon all of my throat patients clothing themselves in wool from October to June. The undergarments should in all cases be high in the neck, as the chest needs more protection than it usually receives, especially with men. For womankind I advocate most heartily some variety of the combination garment. In no other way can their lower limbs be properly clothed without adding to the already suicidal weight most women are carrying around their waists.

Many of my patients when consulting me for the first time will confess that they wear nothing but cotton underwear the year around. Dressed in this manner the wonder is that more women are not under the doctor's care for one disease or another, any of which cannot fail to be aggravated by this thoughtless exposure. No heavy outer clothing in way of skirts can take the place of wool next the body.

Concerning outer clothing several points should be noted.

The coat does not make the man, but the manner in which it is worn frequently has much to do with *un*-making the health of our patients. Especially is this true of women. The way their outer wraps are worn rather than their quality is of importance. This is quite reversing the ordinary rule of polite society, but it is merely another instance where being in the majority does not make one in the right.

I can understand how the lady with a new sealskin sack is tempted to believe it necessary to sit through service without removing it, far more than some hard-working woman whose cloak "has seen better days."

But in so doing a great many colds originate. Ladies sit for hours indoors with bonnets and wraps on while their escorts have both removed. Let them remember to lay aside all outer wraps even in making a short call. If this is done one way of "taking cold" will be avoided.

While speaking of outer garments, I wish to say a word

about the proper clothing for the feet. There is with many a natural tendency for the feet to perspire slightly, and where this occurs woolen hosiery should not be worn, for it will be remembered that the rule must be to wear such clothing as will keep every part of the body "dry and warm." The effect of moisture on the feet is forcibly shown in the following from a German investigator: "I made an effort to study the influence which would be exerted upon the temperature of the skin by marked cooling off on one foot, and this with a view of clearing up the question of taking cold. For the purpose named, I put one foot in a basin of cold water. Immediately the temperature of the skin of the breast sank to a marked degree, so much so, indeed, that the needle of the thermo-electric pile I was using at the time ceased to record it. By evening I began to sneeze and got so severe a cold that I was not willing to repeat the experiment. It appears to me as a result of this experiment that by rapidly lowering the temperature of one foot, the temperature of the whole surface of the body immediately sinks, and as this can occur only as the blood is driven out of the vessels of the skin, it must follow that the blood is forced into the internal organs generally, or what is more unfavorable still, into some particular ones, leading to an inflammation, or as in my case to a severe cold." The importance of so protecting the feet that they may be, as before mentioned, "dry and warm," is of extreme importance in preventing all catarrhal inflammations.

Another preventive of throat diseases is the frequent bathing of the neck and chest in cold water. This should be immediately followed by energetic rubbing until the flesh glows with a pleasant warmth. This acts in a double way in bringing the blood to, and so nourishing, the surfaces bathed and also actually toughening the skin. The blood being drawn to the surface of the body tends to relieve congestion or inflammation of parts more deeply situated, while the rubbing, if persisted in, will render the neck no more sensitive to cold than a surface a few inches higher on the



face. In no instance should a bath, warm or cold, be taken immediately before going into the open air. Ample time must be allowed for every part to become completely dry, or injury will follow rather than benefit.

While upon this division of the subject let me speak a word against the practice of so many men of wetting the hair. When this is done without ample time being allowed for the hair to become perfectly dry before going outdoors, throat, lung, and other catarrhal diseases frequently result.

An improper use of the voice many times produces various throat troubles. This is especially true of teachers singers, and public speakers, where there is an improper understanding of the action of the organs of phonation.

I trust, as physiology is now being taught in our public schools, that after this generation no one will lack knowledge of how to breath and articulate in accordance with the laws of health. Natural laws cannot be violated without suffering the attached penalty. If the larynx is forced to do an unnatural amount of work, or in an unnatural manner, serious consequences are bound to follow.

It is a significant fact that the same nerve controls respiration and vocalization. The two must act in sympathy, and while articulation is produced by the combined effort of tongue, teeth, lips, and palate, the production of vocal sounds occurs in the larynx. The quality of tone, therefore, and the ease of vocal expression, depend intimately upon the depth and character of respiration. Any young lady wishing to become proficient in vocal culture must begin by using every bit of lung tissue God gave her.

If corsets are used, not only will respiration be necessarily more or less impeded, which will destroy the beauty of her tone, but the larynx will have an increased and unnatural work to perform, and being thus overworked, frequently becomes diseased. I have found among the large number of professional people, consulting me in reference to various troubles of the voice, that almost invariably, lack of proper lung expansion existed.

Thus far the different means pointed out whereby various

throat troubles may be prevented, are all of such a nature that patients can, if convinced of the necessity, carry them out themselves. They are of such non-surgical and hygienic character that the attention of intelligent patients has but to be directed to them to probably secure their co-operation.

I say *probably*, because there seems to be a certain class of patients who in the way of medicine are willing to take anything except to take care of themselves. They will unblushingly ask a physician to overcome in some supernatural way what their persistent carelessness is continually producing.

I will now speak briefly of a few ways of preventing throat troubles which are especially in the physician's province, and which should never be neglected.

In every persistent throat case careful rhinoscopic examination should be made of the nasal and post-nasal spaces for the presence of any abnormality. We may not believe with Bosworth, that there is no such thing as laryngitis, in that the larynx is not the seat of the disease, but that this is in the nasal passages above; but the intimate connection between nasal obstruction and difficulty lower in the respiratory canal cannot be disputed.

Any nasal irritation or deformity will affect the voice. How this is done can be plainly understood, from the fact that as the use of the nasal chambers are interfered with, the voice loses just so much thereby, while the patient naturally endeavors to keep the voice normal in amount and quality. This can only be accomplished as the vocal muscles are forced to an unnatural tension, producing fatigue and subsequent impairment of the voice. Hence attention must be directed to the removal of every abnormality of an inflammatory or obstructive nature in the nose if we wish to prevent throat disease.

Next the naso-pharyngeal space must receive attention in many cases, as it is in the continuity of the respiratory tract, and its anatomical characteristics are much the same. The unnatural growth of Luschka's tonsil must be

removed, together with all adenoid growths, and in many cases also the faucial tonsils.

The rule should be that any abnormality in the upper respiratory tract will predispose to more serious throat and lung diseases, and therefore should be removed.

When this has been done and the perfect co-operation of the patient secured, we have made it possible to cure many cases hitherto called incurable, and, what is of quite as great importance, to prevent their recurrence.



## MATERIA MEDICA AND THERAPEUTICS OF THE EYE.

BY C. C. BOYLE, M. D., NEW YORK.

**KALI CARBONICUM.**—Bright sparks, blue or green before the eyes (Bell.; Cycl.; Merc.; Phos.; Sulph.).

While reading or looking at a bright light, *muscæ volitantes*, (Cycl.; Merc.; Puls.; Sulph.).

Spots, mists, and black points before the eyes, (Caust.; Cocc.; Ind.; Digit.).

Eyes weak; after coitus; after abortion (China).

Smarting, burning, biting, and stitching pain in eye.

Eyes painful on reading (Jab.; Nat. m.; Phos.; Ruta.; Sep.; Sulph.).

Stitches in eyes and root of nose.

Soreness of the external canthus, with burning pain.

Lids swollen and inflamed; agglutinated, especially in the morning, (Lyc.; Merc.; Puls.; Sulph.).

Lids red and swollen (Apis; Rhus).

Puffiness: swelling between the eyebrows and lids like a sac.

Bag-like swelling under the eyes (Apis.).

**KALI IODATUM.**—Vision dim and foggy: sees objects indistinctly (Calc. c.; Caust.; Croc.; Kali carb.; Merc.; Phos.; Puls.; Sulph.).

Conjunctiva chemosed; purulent secretion; eyes burn and are red from lachrymation; scrofulous ophthalmia.

Œdema of lids with lachrymation.

Œdema of cellular tissue surrounding the eyes.

Eyeballs painful on moving them.

*Clinical.*—Its especial sphere of usefulness is in those diseases of the eye due either to syphilis in the tertiary stage, or where it has been inherited. I have never seen much benefit from its use until after the secondary symptoms have disappeared.

In a case of retrobulbar neuritis, which was undoubtedly due to a gumma of the optic nerve, the patient lost his sight suddenly; under heavy doses of this drug it was restored in three weeks' time.

I have used it in all the different diseases of the eye, but found it especially useful in chorio-retinitis accompanied by more or less haziness of the vitreous, with floating opacities.

In iritis, I have found very little benefit from it, but descemetitis I have cured with it.

In neuro-retinitis syphilitica it is *the* remedy to use, unless some other is strongly indicated.

In paralysis of the different ocular muscles, due to syphilis, I have used it with curative effect.

KALI MURIATICUM.—Dimness of vision; vitreous hazy, and filled with floating opacities.

Infiltration of parenchyma of the cornea.

Ulceration of the cornea.

Moderate redness of the eye.

Discharge of white mucus from the eyes, or yellow or green matter.

*Clinical.*—It is one of the best remedies for parenchymatous keratitis, where it is accompanied by very little redness, pain, or photophobia, but the infiltration of the parenchyma is very marked, also in ulceration of the cornea of the same type.

In several cases of descemetitis with vitreous filled with floating opacities, this remedy has cured quickly when other remedies, such as Merc. cor. and Kali iod., failed.

It is a great aid in reducing maculæ in size; that is the infiltration surrounding the scar tissue, as there is no remedy that removes the latter.

Recently I have used it in a case of plastic iritis, where

there was excessive quantity of plastic exudation thrown out and which nearly filled the anterior chamber; this exudation was checked and absorbed in four or five days.

KALMIA LATIFOLIA.—Glimmering before eyes.

Everything black before eyes on looking downward.

Eyeball painful on motion; stiff feeling in eye on moving it.

Severe pain in right eye extending to forehead, beginning at sunrise, growing worse until noon, then relieved, and leaving at sunset (Nat. mur.; Stannum).

Pain over right eye; giddiness; eyes weak and watery.

Pain in the eyes which causes soreness on turning them (Bry.; Rhus; Spigelia).

Sensation of stiffness in muscles around eyes, and also of the eyelid.

Eye symptoms worse in the evening and in the open air.

*Clinical.*—This remedy is one that is indicated especially in rheumatic affections. I have cured attacks of scleritis with it, in which, besides the ciliary injection which accompanies this trouble, there was stiff, drawing sensation on moving the eyeball.

Also a case of episcleritis (if this distinction can be made from the former disease) in which there was a nodule over the external rectus muscle.

In asthenopia, accompanied by a stiff drawing sensation in the muscles upon moving the eyes, this remedy has relieved.

One very obstinate case of blepharospasm of the left eye which had been treated by different physicians and by myself for some time, was cured upon my prescribing this remedy on the symptom of "stiff sensation in muscles of eye on moving it." It is reported as curative of retinitis albuminurica during pregnancy.

LACHESIS.—Flickering before the eyes as from a thread or rays of the sun.

Fiery ring about the light, with fiery rays.

Fog before the eyes. Eyes sensitive to light.

Bright blue ring about the light, filled with fiery rays.



Dimness of vision ; black flickering before the eyes.

Sharp shooting pains from eyes to temples, top of head and occiput.

Stitches as from knives in eyes, coming from the head.

Sensation as if a thread was drawn from behind eye to eye.

Eyes feel as if they had been taken out and squeezed, and then put back again : pains < after sleep.

Pressure in orbits with sensation of drawing from eyes to occiput.

Eyes feel as if forced out when throat is pressed.

Severe pain in and above eyes.

*Clinical.*—This remedy is often prescribed with benefit in the different hemorrhagic affections of the eye, especially those of the retina and optic nerve, no matter what the cause may be.

It has cured orbital cellulitis following strabismus operation ; the eye was protruded, conjunctiva chemosed, accompanied by a purulent discharge ; retina hazy and congested. It is used in various neuralgic pains in the eye, especially the left.

One of its chief characteristics is the aggravation after sleep. Can't bear anything around the body.

Think of it in hemorrhages of the eye in women during climacteric period.

LEDUM.—Inflammation of eyes with tensive pain. Burning pressure < in the evening, with agglutination in the morning, with lachrymation during the day. Pupils dilated.

Pain behind eyeball as if it would be forced out (Actea rac.; Bell.; Guaiac.; Guarea.; Paris). Tearing in bone above left eye. Boring in right lower orbital margin. Vision of black floating points.

*Clinical.*—I have used it both locally and internally in ecchymosis of conjunctiva either traumatic or otherwise. It has cured ptosis of lids accompanied by extravasation of blood.

LILIUM TIGRINUM.—Vision dim and confused, with dis-

position to cover eyes and press upon them. Blurred vision, with heat in eyes and lids; *muscæ volitantes*.

Intense pain in eyes, extending back into head. Dull frontal headache, < over the left eye, or alternating from side to side.

Burning feeling in eyes after reading or writing; eyes feel very weak.

*Clinical*.—It is a good remedy in asthenopia, especially in females who have uterine troubles, ovarian irritation, and hysteria. The symptoms covering the generative organs, I have found, will guide one in selecting this drug for relief of eye symptoms.

LITHIUM CARBONICUM.—Asthenopia, with black motes before the eyes, and sensitiveness of eyes after using them by candle light.

Entire vanishing of right half of whatever looked at (*Lyc.*). Eyes pain during and after reading, as if dry, and as if little grains were in them (*Caust.*; *Sulph.*). Scrofulous inflammation of eyes with hardening of the meibomian glands.

All symptoms are worse on the right side, in this drug.

LYCOPODIUM.—Veil and flickering before the eyes, black spots before the eyes (*Cycl.*; *Merc.*; *Phos.*; *Sulph.*). Eyes dazed by light, and painful, as if bruised. Hemiopia; sees only left half of objects (*Lith.*; *Carb.*). Vision weak, seems as though he were looking through a fine lattice or a fog.

Night blindness (*Bell.*; *Cad. m.*; *Hyos.*, *Stram.*, *Ver. alb.*), with black spots before the eyes.

Dryness of the eyes in the morning; obliged to close the lids; difficult to open them; feeling as if dust were under the lids.

Stitches and soreness in the eyes; in evening when looking at the light.

Much mucus in the eyes, with smarting pain. Ulceration and redness of the eyelids; water flows from the eyes, smarts and bites cheek (*Euph.*; *Merc.*; *Sulph.*). Pustules and styes on lids; more toward inner canthus.

LYCOPUS VIRGINICUS.—Protrusion of the eyes, with

tremulous action of the heart; exophthalmic goiter. It has been reported as relieving the symptoms of morbus Basedowii.

MERCURIALIS PERENNIS.—Dilated pupil, with great sensitiveness to light.

Pain in eyes on reading and writing; letters run together.

Hyperæmia of the conjunctiva after using the eyes, with heaviness of the lids, weakness of upper lids, so that at times they could not be completely raised.

MERCURIUS.—Dim vision. Eyes are drawn almost involuntarily on attempting to look at anything; > by closing eyes.

Blinded by firelight. Fog before eyes. Burning, heat, and lachrymation in the eyes. Tearing pains in forehead and vertex, shooting deep from within; < evening and night. Conjunctiva inflamed and swollen; lids swollen, and tender to touch; great photophobia; hot lachrymation.

Lachrymation profuse, burning, and excoriating.

*Clinical.*—This remedy has been used in almost all of the various diseases of the eye, but I have found its most useful sphere in affections of the lids, conjunctiva, and cornea; in catarrhal conjunctivitis where there is redness, accompanied by a thin watery excoriating discharge, with aggravation at night and also by firelight; lids also swollen and red; also in scrofulous affections of the cornea, such as phlyctenules, pustules, and ulcers accompanied by the same symptoms and aggravations. I do not think much of it for iritis, as other forms of mercury are better and more often indicated.

MERCURIUS DULCIS.—I have found it most useful in scrofulous affections of conjunctiva and cornea, such as phlyctenules, pustules, or ulcers, especially if accompanied by eruption on face, soreness of nose, and swollen upper lip. It hastens absorption of adhesions in iritis. In these cases give it in a low potency.

MERCURIUS NITROSUS.—Is used in those cases where there are repeated attacks of phlyctenules, pustules, or ulcers of the cornea.



It has burning pains and lachrymation, sharp, sticking pains.

You generally have the mercurial indications and aggravations.

It is often used as a wash (ten grains of the first trituration to the ounce of water) at the same as it is given internally. After cataract operation where the wound refuses to heal under ordinary treatment, from lack of vitality, a wash (ten grains of the 1x trituration to the ounce of water) is used locally, by passing a brush that has been dipped into this solution over the lips of the wound once or twice a day; it stimulates the edges, and as a result the wound heals in a day or two.

MERCURIUS PROT.—Conjunctiva very red and vascular, with photophobia and lachrymation.

Throbbing; aching, with nightly pains.

*Clinical.*—It is an excellent remedy in conjunctivitis trachomatosa, with pains and ulceration of the cornea; has intense redness of conjunctiva and vascular condition of cornea; marked photophobia and lachrymation.

It is a good remedy in all forms of ulceration of the cornea, especially in that known as serpiginous, accompanied by marked redness of conjunctiva, cornea vascular, great photophobia, and lachrymation. Frequently guided in giving this remedy, when, combined with other symptoms, we have the tongue coated at base.

MERCURIUS CORROSIVUS.—Excessive photophobia and acrid lachrymation.

Pain behind eyeball as if it would be forced out (*Actea rac.*; *Bell.*; *Guaiac.*; *Guarea.*; *Lach.*; *Spig.*). Pain severe over eyes, through them, and through head and temples; < at night. Tearing as if above left eye, near root of nose and in other parts of bone.

*Clinical.*—This remedy is used in more diseases of the eye than any of the mercurials. In iritis, whether syphilitic or not, I have found it more frequently indicated, and also curative; we have the pains in eyes and up over the head, nightly aggravations; eyeball sore, especially over ciliary

region. Iritic adhesions, marked redness and photophobia ; also in kerato-iritis and various forms of corneal affections, as ulcers, pustules, phlyctenules, and in some forms of parenchymatous keratitis. It is also one of our best remedies for different diseases of the choroid, retina, and optic nerve, as in chorio-retinitis syphilitica and neuro-retinitis albuminurica. In both cases we have a choroidal and retinal exudation and tendency to hemorrhages ; opacities in vitreous, especially in the syphilitic form.

## SUBMUCOUS INFILTRATION OF THE SIDES OF THE VOMER AND ITS TREATMENT.\*

BY CHAS. E. TEETS, M. D., NEW YORK.

THIS affection seems to be overlooked by most authorities on diseases of the nose and throat. If any recognize this condition they must include it under hypertrophic rhinitis, considering it unnecessary to mention separately this particular form of hypertrophia within the nasal cavities.

This appears to me a great oversight, because this affection is not uncommon; and, furthermore, it is impossible to make a diagnosis by anterior rhinoscopy, but only by a posterior rhinoscopic examination; and, therefore, if included under hypertrophic rhinitis it is liable to be overlooked. We frequently observe cases in which the anterior portion of the nasal chamber is clear, but where the posterior portion is obstructed by an enlarged turbinated body, or by a swelling of the mucous membrane, covering the posterior portion of the vomer. This latter condition is called submucous infiltration of the sides of the vomer.

This affection is characterized by a difficulty in nasal respiration, and by increased secretion—the mucus dropping down into the throat; often compelling the patient to hawk and expectorate continuously. On examining the nasal cavities, the anterior portion is frequently found free from obstructions; and, if the physician does not investigate further, he will at once come to the conclusion that the increased discharge is the result of hyper-secretion of the mucous membrane, and will commence applying some astringent, which will have little or no effect upon this

\* Read before the Homeopathic Medical Society of the County of Kings.



hypertrophy. The œdematous tissue, if recognized, could be more rapidly destroyed by the galvano-cautery.

Other symptoms which are directly due to submucous infiltration of the vomer are, mouth-breathing, restlessness, snoring, and loud breathing at night, impairment of the voice, deformed chest, arched palate, and projecting teeth. In fact, many of the diseases of the ear, when not due to adenoids or other obstructions in the nasal cavities, are due to this affection.

If the nasal cavities are blocked, and we are compelled to breath through the mouth, the incoming air not only chills the throat, but causes a dryness and irritation of the pharynx and larynx, resulting in diseases of these parts, which later on, will be difficult to cure. We find mouth inhalation dangerous in other ways—by carrying not only dust into the throat and lungs, but animal and vegetable life into the system, and poison into the blood, thus producing irritation and disease of the lungs, and occasionally resulting in some contagious affection. How different, if we keep the nasal cavities clear and in a healthy condition, since the nasal chambers are furnished with spongy filters, which catch all the dust, and neutralize the poisons which may be taken with the incoming air. The nasal mucous membrane also furnishes moisture and heat to the incoming air, and thereby prevents the direct contact of dry cold air with the throat and lungs. If you have under your care a patient suffering from phthisis, whose nasal passages are obstructed, you need never expect satisfactory results from your remedies until you have cleared away this obstruction and allowed your patient to breathe through the nose, and take air to the diseased lungs which has been filtered, warmed, and charged with moisture.

This is not a new idea ; because, in consulting a very old work, though not a medical one, translated in 1743, I ascertained it was even at that time the belief that a healthy person was only one that could breathe freely through both nostrils, in inhalation as well as exhalation.

I have operated on several patients who had incipient

phthisis, and it has always been a surprise to me to see the marked benefit following operations for nasal stenosis; the improvement starting in soon after the operation. It is so often the practice to make only an examination of the anterior nasal passage, and, if hypertrophied tissue is present to make applications to reduce it. If there is no obstruction at the posterior part of the nasal chamber, this treatment will be often followed by good results. But, if an obstruction exists at the posterior part of the nasal cavities, you will not have permanent results following treatment directed alone upon the anterior hypertrophy. First, reduce the posterior hypertrophy, and, very often, the anterior swelling will disappear without further treatment, as it is often only an erectile condition due to the posterior obstruction, and which can be temporarily reduced with cocaine.

I have repeatedly seen in children, accompanying the adenoids, this erectile hypertrophy, and when the adenoids were removed the swelling would disappear without further treatment. Inspection of the posterior nares by the aid of the rhinoscope will reveal either at the extreme edge of the vomer or near its poster margin, a white or yellowish-white swelling, varying in size, and sometimes completely blocking up the posterior opening. This may be confined to one side, but usually both sides are affected. This form of hypertrophy is often mistaken for polypi. Sometimes the hypertrophy is more marked at the upper portion of the vomer. This redundancy of tissue, looking something like the shape of a pear, does not completely block the posterior opening, but comes in contact with the upper portion of the opposite side, and consequently produces irritation. Astringents and internal medication have little effect upon this form of hypertrophy; therefore, our treatment must be in the main surgical. We may contract or destroy this redundant tissue by means of the galvano-cautery, or by tearing it off with suitable forceps.

Great care must be exercised, however; otherwise, we are apt to wound the neighboring tissue.

The diseased tissue may be reached in the two ways; either through the anterior nares or through the naso-pharynx. If we operate through the anterior nares, we must first measure the distance from the posterior margin of the vomer to the lower anterior margin of the columnar cartilage. This may be accomplished by means of a strip of lintine,  $\frac{1}{2}$  in. wide, and a flat applicator. The lintine is introduced through the anterior nares, and pushed forward until it reaches the naso-pharynx. It is then pulled gradually forward, until the posterior edge of the lintine is even with the posterior margin of the vomer, using the rhinoscopic mirror to assist us. The anterior portion of the lintine is then cut off, on a line with the anterior margin of the columnar cartilage. The lintine is then removed, and the distance marked upon the electrode or forceps. The next step is to introduce the electrode and push it forward along the septum until the platinum point reaches the obstruction, when it is pressed firmly against the tissue to be removed, and the current turned on. These applications should be made once a week until the tissue is destroyed. The forceps may be introduced in the same manner, and the redundant tissue cut off; but preference should be given to the galvano-cautery, as it is less liable to produce hemorrhage.

If we operate through the naso-pharynx, the tongue should be held down by the patient or by a self-retaining tongue depressor.

The palate retractor should then be introduced, and the palate drawn well forward. With the left hand, the rhinoscopic mirror is introduced and placed in position; so that the naso-pharynx and the parts to be operated upon will be reflected in the mirror.

A properly bent electrode is then passed behind the soft palate to the part to be operated upon, and the tissue destroyed; which can be done without much difficulty.

All operations of this character should be preceded by applications of cocaine.



## ASTHENOPIA VS. DIABETES.

BY FRANK D. W. BATES, M. D., HAMILTON, ONT.

I WOULD like to call the attention of the profession to a little book written by Dr. Chalmer Prentice and edited by A. C. McClurg & Co., Chicago, entitled, "The Eye in Its Relation to Health." I have looked for several months past in the various ophthalmic journals for comments upon the theories advanced by Dr. Prentice, but have failed to find any. Surely the book cannot have been very extensively read, for certainly it cannot be considered unworthy of comment.

Among others, he advances the theory that diabetes is caused by eye strain. For years past the various writers upon diabetes have mentioned asthenopic and accommodative troubles of the eye as resulting from diabetes. It will be singular now, if after all these years we find that we have been putting the cart before the horse, and that these various muscular troubles of the eye instead of being the result of diabetes, have been the cause of the same; but his theory seems plausible and his deductions most convincing.

When we come to think that the deep origin of both the abducens and trochlear nerves is in the floor of the fourth ventricle, and that of the motor oculi in the iter e tertio ad quartum ventriculum, and that unsymmetrical action of the muscles of the eye will produce irritation of the nerve centers (knowing, as we do, that irritation of the floor of the fourth ventricle will produce diabetes), it seems to me not only possible, but quite probable, that the theory of Dr. Prentice is correct. At all events, it is worth looking



into, and I hope before long to see an article in the JOURNAL OF OPHTHALMOLOGY upon this subject. I myself have been applying the treatment to a few cases for a short time past ; and, while I have not been at it long enough to give a report of cases that would be of any value, I may say that by producing repression, as advocated by Dr. Prentice, I have thus far found an improvement in all the symptoms, including a lowering of the specific gravity, lessening of the amount of water taken, and urine voided.

## MATERIA MEDICA OF THE NOSE AND THROAT.

BY A. WORRALL PALMER, M. D.

### KALI MURIATICUM.

\*Useful in the third or last stages of inflammatory diseases, such as phlegmonous inflammation of nares, \*retro-pharyngeal abscess, gangrenous sore throat and \*abscessus laryngis, \*profuse nasal discharge with sneezing. \*In catarrh of naso-pharynx and pharynx the mucous membrane is anæmic and thickened, obstruction of Eustachian with sensation of weight or pressure in ear, profuse secretion of tenacious mucus, adherent crusts on vault of pharynx and a dry, stiff, burning sensation or a painful feeling like crumpling on deglutition, as if throat were varnished. \*Acute or chronic follicular pharyngitis, mucous membrane anæmic, principally located in naso-pharynx, with burning, hawking up cheesy lumps; adenoid vegetations; \*ulcerations at base of tongue with whitish gray exudation.

\*Early stages of hypertrophied tonsils.

\*Syphilitic ulceration in any part of the tract, with red, tumid mucosa. \*In larynx have a croupous exudation. \*Perichondritis chronica; subacute or chronic thickening of subglottic tissues; \*ulcerations of indolent character, such as follow typhoid, typhus, smallpox, or pertussis.

### KALI PHOSPHORICA.

This drug is curative in two general classes of conditions; 1st, in diminution of nerve power (paralysis); 2d, extreme

decomposition of tissue. \*In pharynx and larynx are paralysis, causing regurgitation of food or aphonia, associated with paralysis elsewhere, especially if sequelæ of diphtheria (*gels.* and *zn. phos.*=post-diphtheritic paralyses. *Lach.*=regurgitation of ingesta). \*Hoarseness from over-exertion of voice in rheumatic, nervous, or debilitated individuals. \*Asthma, pertussis, or croup in nervous or debilitated individuals and the latter in last stage, with pale, livid countenance. It, as well as *ac. carb.*, *bapt.*, and *merc. cyan.*, has been curative in the severer forms of diphtheria, where there is gangrenous decomposition and excessive prostration.

#### KREOSOTUM.

Another drug deeply affects tissue changes as we find it administered with benefit in \*epithelioma of right ala, \*carcinomata and sarcomata with profuse, dark, bloody, ichorous discharge and \*lupus. In these as in all conditions in which it is curative there is the characteristic *burning, acrid discharge*. \*Diphtheria with wide spreading ulceration, especially on pillars of fauces and velum palatum, also may extend down the esophagus, with acrid discharge of great fetor (*kali perm.*, *kali phos.*, and *merc. cyan.*), and extensive disintegration of tissue and involvement of lymphatics. \*Violent laryngeal cough with hoarseness and soreness of the lungs and bloody or greenish-yellow expectoration; \*winter cough of old people. Personally I have had exceptionally good results with this remedy in several cases of hypertrophic naso-pharyngeal catarrhs accompanied with attacks of dyspepsia, in which was very marked the inflammation of the mucous glands around the roots of the teeth, and the hyper-acidity of their secretion, with the accompanying line of decay near the roots.

#### LACHESIS.

**Nares.**—(*Discharge*).—\*Coryza or ozena with discharge of bloody matter and soreness of nostrils and lips, obstruction of nostrils and accompanied by soreness of throat.

(*Bell.*, and *kali bi.*=bloody mucus from nose with sore throat. *Nux v.*=acid, bloody mucus from nares with sore throat). \*Diphtheria with sanious excoriating discharge (*kali phos.*, *kreos.*).

(*Epistaxis*).—Trickling of blood on blowing. E. preceding menses or during menopause (*verat. alb.* = before menses; *sil.* = after menses). \*Dark hemorrhage accompanying low forms of fever as typhoid, also, dark thick blood, with headache and vertigo, accompanying amenorrhœa (*croc.*, *ham. virg.*, *phos.*, and *sec. c.* = dark thick blood. *Bry.*, *ham. virg.*, and *puls.* = vicarious menstruation).

**Naso-Pharynx and Pharynx.**—(*Objective*).—\*Mucous membrane of a dull, purplish, soggy appearance. \**Ulceration of tonsil with soreness and difficult deglutition.*

\*Acute pharyngitis, mucosa dry, shiny, dusky red, and mottled. \*Chronic follicular pharyngitis with venous congestion and puffiness of uvula, velum palati, and tonsils, irritability, hyperæsthesia and desire to swallow plug in throat. \*Herpes. \*Erysipelas. \*Croupous pharyngitis. \*Asthenic diphtheria, deep redness and purplishness of mucosa, membrane extends from left to right, tendency to attack larynx, with hoarseness, constitutional symptoms out of proportion to local manifestation. \*Pharyngeal hemorrhage, \*acute follicular tonsilitis, livid color before patches appear. \*Post-scarlatinal gangrenous sore throat.

\*Syphilitic ulceration, \*elongation of uvula with constant efforts to clear throat.

(*Subjective*).—*Sensation of a crumb stuck in throat*, obliging to swallow. \*Pain in pit of throat < left side, extending into tongue and hyoid bone and left ear (*sil.* = sticking on swallowing, and pain on slight touch. *Arg. nit.*, *nitr. ac.* = splintering pain on deglutition. *Hepar s.* = sharp pain extends up to ear on swallowing. *Alum.* = shooting here and there in throat). \*Soreness in pit with sensation of something swollen and would suffocate him, it cannot be swallowed. \*Painful lump on swallowing (*nitr. ac.*, *phyto.*, and *wyethia*). *Dryness at night on waking without thirst*, with suffocative sticking. \*Swallowing saliva or liquids



more difficult than solids. \*Acute pharyngitis, subjective symptoms much more prominent than objective, especially at beginning, constricted sensation, constant desire to swallow, although difficult and painful; pain extends to ears (left worse), appearance dry, shiny, dusky, and mottled; discharge tenacious. \*Paralysis of velum palati with regurgitation of fluid through the nose as after diphtheria (*gels.*, *zn. phos.*).

(*Discharge*).—*Hawking of mucus after a nap in daytime with rawness in throat.*

**Larynx and Trachea.**—(*Objective*).—\*Diphtheritic croupous exudation, extreme fetor, suffocation, face purplish, great prostration, albuminuria. \*Acute œdema of larynx accompanied by albuminuria and dark, almost black urine-like coffee grounds. \*Post-pertussal laryngeal œdema. \*Laryngitis acuta.

(*Subjective*).—*Throat excessively painful from touch or bending head backward. Constantly obliged to take a deep breath.* \*Spasmus laryngis and chronic catarrh dependent on the same. \*Aphonia with characteristic external sensitiveness. Hoarseness from sensation of something in larynx, which cannot be hawked up, although mucus is expectorated.

(*Cough*).—\*Dry hacking c. from touching throat, also in morning. \*C. < after sleep (*sulf.* = c. on going to sleep). C., without expectoration, in eve on lying down and in sleep sometimes awakened thereby. C. in sleep unknown to patient. Violent hacking cough from crawling in ulcer, (*sang.* = tickling c. from crawling in trachea). Violent tickling c. from contact with open air. \*Pertussis, paroxysms awaken from sleep. \*Reflex nervous c.; *e. g.*, from inflammation of the ovaries or pelvic viscera, or during climacteric.

**Characteristics and Concomitants.**—Mostly indicated for females—lachrymose disposition.

\*Headache following a cold or preceding coryza; painful sensitiveness of left side of the head; headache over eyes extending to root of nose.

Dryness of ears,—sensitive to sound.

\*In diphtheria tongue red, dry, cracked, or red tip and brown center, in latter stages the tongue trembles and difficult to protrude it,—fetor oris.

*\*Excessive hyperæsthesia of neck even to the clothing, especially in eve on lying down, with suffocative sensation ;* \*in diphtheria the cellular tissue ; submaxillary, sublingual, and cervical glands much swollen, accompanied with stiffness.

Desire for wines and liquors but < by them ; can bear nothing tight about waist.

\*In diphtheria stools dark brown, cadaverous smelling, anus feels open.

\*With œdema of larynx, albuminuria ; urine dark, almost like coffee grounds ; \*urine scanty and albuminous in diphtheria ; sensation, ball rolling in bladder. Copious acrid leucorrhœa staining linen green.

\*Palpitation and irritable heart after diphtheria—“Cheyne-Stokes” respiration. Pain in back ; trembling and exhaustion. Fever of a low typhoid character. *Aggravation of everything after sleep.*

#### MAGNESIUM PHOSPHORICA.

Magnes. phos. is useful only in neurotic difficulties.

\*It relieves neuralgias in the nares, pharynx, and larynx ; \*benefits anæmia and parosmia ; \*choreic motion of velum palati ; \*spasm or spasmodic contraction of pharyngeal muscles as well as phonatory spasms (of laryngeal muscles) or stammering ; \*nervous laryngeal cough. \*Chronic hypertrophic catarrh of pharynx and naso-pharynx where prominent symptoms were choking during deglutition and spasmodic cough (Ivins).

#### MERCURIUS BINIODATUS.

Dr. T. F. Allen records a case of “nasal polypi even involving orbit” as “entirely cured” by this drug. But the principal sphere of this, as well as all combinations of mercury is in the pharynx and naso-pharynx. It has the highest

fever of the mercurials. Also we notice a great deal of inflammation of the tissues when it is useful, as shown in the following: \*acute follicular tonsilitis, the left particularly, with inflammation and swelling of left submaxillary; \*primary syphilitic lesions; \*acute follicular pharyngitis when the follicles are surrounded by a *red areola* (this we can strongly indorse from verifications and accidental < from low potency of the same); \*in chronic catarrh of pharynx and naso-pharynx the mucous membrane is *dark red*, cheesy concretions in tonsilar lacunæ, sensation of a lump, constant desire to hawk, expectoration of hard white or greenish lumps accompanied by chronic follicular tonsilitis and induration of cervical glands; \*also when tubercular infiltration or ulcer of pharynx or larynx is accompanied by considerable congestion and swelling it is beneficial. \*Acute pharyngitis with sensation of sore spot and sticking on empty deglutition (ign., lach.) with or without follicles. \*Chronic catarrh when throat feels sore and scalded on waking, especially during empty swallowing; \*chronic thickening of tissues of larynx (kali mur.)

#### MERCURIUS CORROSIVUS.

This preparation is the ulcerative mercurial or the one that is most curative in *tissue necrosis, especially of syphilitic origin*. \*Syphilitic ulcerations anywhere in the respiratory tract, either of secondary or of congenital hereditary origin. Although the mercurial ulcer is usually superficial this compound has \**perforating septal ulcer; phagedenic ulcer* of velum palati, pharynx, buccal cavity or larynx and trachea; all accompanied by *acrid, malodorous discharge and burning pain*. \*Also ulcer accompanying ozena with severe pain and discharge, latter is gluey and dries in scurfs in naso-pharynx; rawness, and smarting. \*Fluent coryza with burning heat, nostrils very sore, extremely violent symptoms. \*Nasal and pharyngeal diphtheria with offensive dark or yellow pseudo-membrane, especially if have nasal hemorrhage (*lach.*), *ulcers* inside of cheek, salivation, and secondary gastric disturbance; swelling and dark red-

ness of pharyngeal tissues and uvula threatening suffocation (*lach.*); \**non-specific* ulceration of pharynx with *burning*. Aphonia and vocal difficulties from secondary syphilis.

#### MERCURIUS CYANURETUM.

The sphere of this preparation is in diphtheria. Dr. Allen says, that with exception of this combination, the mercurials are seldom indicated in this dread malady. The keynotes of this drug are *the great prostration and excessively disagreeable odor of breath*, which accompany *all* conditions in which it is curative. \*Diphtheria of pharynx or larynx, false membrane is white, yellow, or gray, expectoration thick and stringy, marked swelling of glands, *adynamic fever, pulse small, rapid, and intermittent, great prostration*, and even collapse at early stage. \*In naso-pharynx secondary or congenital hereditary syphilitic ulcers with hard irregular edges and excessive bad odor. It should always be used in the 12x attenuation or above as lower potencies usually fail. Dr. Villers, in writing of diphtheria, says of the cyanide that if the remedy is given in the stage of invasion, *i. e.*, before the exudate is deposited, it will not appear at all, and "as a prophylactic it is especially effective."



## POINTS TO REMEMBER.

THE fluid extract of *geranium maculatum* is an excellent remedy in nasal hemorrhage, either idiopathic or traumatic. It also gives satisfactory results if used after operations for the removal of adenoids or the faucial tonsils. It may be given internally and applied locally.

When the ulcers of the tertiary form of syphilis heal slowly, the use of the galvano-cautery will sometimes act most rapidly in arresting the destructive process.

In the tertiary form of syphilis, to arrest the ulcerative process, some advocate the use of what is known as chromic acid caustic. First a ten per cent. watery solution of chromic acid is applied to the ulcer, then, immediately after, the solid silver nitrate. The result is a change to silver chromate and nitric acid. The action on the tissues is rapid, and much less painful than is the application of nitric acid.

As a substitute for iodoform in the ulceration of syphilis, good results can be attained from the topical application of eucalypti and boracic acid, equal parts.

Where there is a copious discharge of mucus from the posterior nares, dropping into the throat, causing a tickling and obstinate cough, worse at night and when lying down, *spigelia* is the remedy.

Many of the cases of hypertrophic rhinitis are nothing more than an erectile condition of the turbinated bodies. This can be reduced by applying some astringent, but it is not necessary, as *passiflora* given internally will have the same effect as local applications.

TEETS.

## ABSTRACTS FROM CURRENT LITERATURE.

**Russell.—Representation of Abduction of the Vocal Cords in the Cerebral Cortex.**—*Journal of Laryngology*, ix, 1895.

The author found it was possible to separate the abductor from the adductor fibers in the recurrent laryngeal nerve, so that the stimulation of one produced abduction of the cord and of the other adduction. In making his experiments he separated the two bundles, and cut the adductor division transversely, leaving the other intact. This was done in order to make it possible to produce abduction and adduction by exciting the proper cortical centers at the same stage of the narcosis. He found that abduction could be produced by exciting the prorean convolution below and in front of Krause's adduction center. Between these two points lay the supra-orbital sulcus. It was also discovered that excitation of the prorean convolution in either hemisphere caused the abduction of both cords, while excitation of Krause's adductor center produced adduction of the cord whose adductor fibers had not been divided. In experimenting upon animals, without dividing the adductor fibers, it was found that the best results could be obtained from a point on the anterior composite gyrus below the adductor center, and slightly behind the point on the prorean convolution which had been determined when experimenting upon animals in which the adductor fibers of one nerve had been divided.

PEARSALL.

**Turner, Wm. Aldren.—The Results of Sections of the Trigeminal Nerve, with Reference to the So-called "Trophic" Influence of the Nerve on the Cornea.**—*British Medical Journal*, November 23, 1895.

The author, with Dr. Ferrier, performed a series of twenty experiments, while investigating this subject. Of these, four

involved destruction of the tubercle of Rolando, two of section of the restiform body including the "ascending" trigeminal root, four of section of the trunk of the nerve between the Gasserian ganglion and the surface of the pons Varolii, eight of the ophthalmic branch alone, and two of the "descending" or trophic root of Merkel.

In eighteen of the experiments anæsthesia of the cornea was the prominent symptom, but two only showed symptoms of destructive change and panophthalmitis. In both there was evidence of septic irritation, elevation of temperature, etc., and in one the *post-mortem* examination showed commencing septic meningitis.

In fifteen of the cases, with the exception of slight drying of the corneal surface, no opacity or ulceration was detected. Of the eight cases in which the ophthalmic branch was divided, only one showed destructive corneal change, and in that, as already mentioned, there was *post-mortem* evidence of septic meningitis.

In two of these cases, irritants were applied to the cornea, the section in one having been of the right ramus ophthalmicus, and in the other behind the Gasserian ganglion. In both the resulting inflammation took the usual course, showing that whether the trunk of the nerve be divided behind the Gasserian, or the section is of the ophthalmic branch alone, the processes of healthy nutrition and repair may go on, notwithstanding the anæsthetic state of the cornea. The cornea in those cases in which the ramus ophthalmicus was divided, were submitted to careful microscopic investigation, without, however, the detection of any change whatsoever, either in the epithelium, the corneal corpuscles, or the ground matrix. In two cases the trophic root of Merkel was divided in conjunction with the superior cerebellar peduncle. In neither was there any "trophic" effect noticed upon the eye or its appendages.

The general conclusion to be drawn from these experiments is that there is no evidence of trophic influence exerted by the Gasserian ganglion upon the cornea, and that, provided septic organisms are excluded, the ophthalmic branch may be safely divided, or the Gasserian ganglion removed without fear of the disorganization of the eye.

The author states in conclusion that the so-called neuro-paralytic phenomena associated with lesion of the trigeminal nerve are



evidence of irritation of the nerve, and not of paralysis. This statement holds good whether the lesion is situated so as to implicate the ophthalmic branch, the nerve trunk, or the intra-medullary root.

DEADY.

**Veeder, M. A.—Epistaxis through the Eyes.**—*Medical News*, November 30, 1895.

Reports a case of epistaxis in which, on plugging the nostrils with cotton and astringents, the blood found its way into both eyes by the lachrymal ducts, and continued to flow quite profusely for nearly half an hour, trickling down over both cheeks in quite a stream at times.

DEADY.

**Bosworth, F. H.—A Case of Suppurative Ethmoid Disease, Followed by Invasion of the Sphenoidal Sinus, Abscess of the Brain, and Death.**—*New York Medical Journal*, October 12, 1895.

In this case a purulent discharge from the left nostril, of several years' standing, had recently extended to the right side. The discharge was offensive and there were occasional headaches. Later, the patient was seized with intense neuralgic headache, confined largely to left side of head and face. Pain was almost constant but there were no symptoms suggesting brain trouble and no fever. Examination revealed large quantities of inspissated pus in the left nasal cavity and some in the right. The middle turbinated bone somewhat swollen and pus oozing from between it and the septum. With the probe the ethmoidal cell walls were found to be soft and crumbling. Recent painful symptoms indicated an invasion of the sphenoidal sinus. The posterior ethmoid cells were opened up, and attempts were made to extend the opening into the sphenoidal sinus by means of a sharp, pointed gouge, with relief from the symptoms for a day or two. Later the operation was repeated with a dental burr, but with little relief, and the next day, the patient was seized with a profound chill followed by fever, with a temperature of 106°. He was semi-conscious, not easily roused and partial paralysis of the left side of the face and arm had set in. Two other rigors followed at intervals of six hours and death occurred twenty-four hours after the first chill.

DEADY.



**Bigler, W. H.—Glaucoma.**—*Hahnemannian Monthly*, November, 1895.

The writer states that he has been able to trace in every case of glaucoma that has come under his personal observation, distinct evidences of a rheumatic or arthritic constitution, and suggests this as the first cause which sets in motion the processes resulting in the disease in the primary form. He has repeatedly aborted threatened attacks by the use of rheumatic remedies, and believes that in the prodromal stage, this plan of treatment might be quite as successful as the instillation of eserine and more lasting in its effects.

DEADY.

**Collins, Treacher.—Four Cases of Bi-lateral Glioma of the Retina Cured by Enucleation of the Two Eyes.**—*British Medical Journal*, October 26, 1895.

The first case was that of a boy, who had his right eye excised for glioma when five months old, and his left eye three years later. Three and one-half years after the second operation, he was in good health with no sign of recurrence. The second instance was in a girl whose left eye was removed for glioma when five months old, and right eye nine months later. Her health was perfect four years and seven months after the last operation.

CASE III.—A girl whose left eye was excised for glioma when ten months old and the right eye thirteen months later. Four years after the removal of the second eye, she was in good health, with no sign of a recurrence.

The fourth case was that of a boy from whom both eyes were removed for glioma, when he was one year and four months old. Three years and three months later he was in good health and had no sign of a recurrence.

DEADY.

**Smith, Priestly.—Operating in Chronic Glaucoma.**—*British Medical Journal*, October 19, 1895.

In a discussion on this subject before the section of Ophthalmology of the British Medical Association, Mr. Priestly Smith presented the following conclusions as the result of his personal experience :

1. It is right to operate at any stage of the disease, so long as there is any sight worth saving, provided that the patient's general condition does not forbid an operation, and that he or his friends

have been given clearly to understand that the operation is the only means, but not a certain means, of avoiding blindness.

2. The immediate safety of the eye, as regards the operation, depends chiefly on the avoidance of injury or displacement of the lens and deep-seated hemorrhage. The making of a scleral puncture, so as to slacken the eye, immediately before the iridectomy, is a valuable safeguard against injury of the lens during operation, and displacement of it afterward. Scrupulous attention to the condition of the patient as regards sleep, bodily tranquillity and the action of bowels and kidneys, are the chief safeguards against deep-seated hemorrhage, but in certain cases, this complication is inevitable.

3. The ultimate success of the operation depends largely on the formation of a permanent subconjunctival fistula which keeps the eye slack. The presence of such a fistula is shown by a bleb-like elevation of the conjunctiva over some part of the cicatrix. Iridectomy for glaucoma will be a more perfect operation than it is at present when we have learned how to establish such a filtration scar in every case.

4. Permanent retention of vision is not always secured, however, by an operation which fulfills the requirements already mentioned. The optic nerve, like other nerves, when once it has been reduced to a condition of partial atrophy, as in advanced glaucoma, is especially liable to undergo further atrophy when the nutrition of the nervous system in general fails. Anxiety, overwork, loss of appetite, and loss of sleep, are potent causes of such failure.

The treatment of glaucoma must, therefore, include in addition to an efficient operation, careful and persistent attention to the health and habits of the patient.

DEADY.

**Webster, David.—Recurring Monocular Retinal Hemorrhages from Heart Disease.—***N. Y. Academy of Medicine.—Am. Medico-Surgical Bulletin*, January 18, 1896.

Webster reports a case of the above occurring in a male of fifty-one years, married, by occupation an engineer.

He was led to seek relief for failing vision, complaining "that it was hard for him to get a focus on anything." He experienced no pain except after over-use of the eyes in reading. Vision was O. D.  $\frac{20}{100}$ , O. S.  $\frac{20}{70}$ .

Glasses for both near and distance were prescribed, and the case was lost sight of for about six months, when he returned, stating that about a month previous, after a hard night's work, he had suddenly observed floating spots and a haziness before the right eye. He had not used tobacco for ten years, and had never been addicted to the use of intoxicants. There was no history of rheumatism. The vision at the time was O. D.  $\frac{20}{100}$ , no improvement, O. S.  $\frac{20}{100}$ , with correcting lens,  $\frac{20}{15}$ .

The field of vision was normal in extent, but showed a large central scotoma. Color sense normal. Ophthalmoscopic examination revealed the presence of a large retinal hemorrhage occupying the region of the macula of the right eye, with several smaller extravasations above and below it. Two months of rest and the administration of bichloride of mercury caused disappearance of the smaller hemorrhages, and a reduction in size of the larger one. Complete recovery followed gradually.

Physical examination revealed the existence of valvular insufficiency, together with cardiac hypertrophy. There was no renal trouble.

Six months later he applied again, stating that on awakening the previous morning he noticed a scotoma before the right eye, and examination by aid of the ophthalmoscope revealed the presence of another, but smaller hemorrhage, in the macular region. The act of respiration was performed with difficulty; he presented an anæmic appearance, and seemed exhausted. During the six weeks that followed, his general condition improved under the use of codein, nitro-glycerin, and iodide of potash, and the retinal hemorrhage was completely absorbed, leaving only a trace of pigment.

He died suddenly, two months later, from heart disease.

RITCHIE.

**Davidson, James N.—Formaldehyd in Eye Disease.**—*British Medical Journal*, No. 1829.

The writer claims that solutions of the commercial article in strengths ranging from 1-2000 to 1-3000 is fully equal, if not superior, to the galvano-cautery in septic ulcers and hypopyon keratitis, it being reliable in its action as an antiseptic, non-poisonous, free from irritation, markedly analgetic in this class of cases, and the resultant scar-tissue less dense.



His method of applying it is as follows : The patient being in the supine position, the hollow about the eye is filled with the fluid, while the constant motion of the lids over the ball effectually bathes the effected parts. This procedure is repeated hourly.

In poorly nourished patients, whose recuperative power is so low that the cornea is unable to resist the attack of the septic matter, this, as well as all other forms of treatment, is of no avail.

RITCHIE.

**Weiland, Carl.—What Is the Cause of the Shadow in Skiascopy ?—*Medical News*, No. 1187.**

Following a review of the literature on the subject, the author gives his own reasons, which he supports by mathematical deductions, illustrated by several diagrams, finally summing up with the following points, to which he calls special attention, owing to the fact that they are either conspicuous by their absence in most of the published literature on the subject, or to the general misunderstanding of them by the majority of the profession.

“ 1. The observer must keep his eyes accommodated for the pupil of the patient.

“ 2. The light area has then exactly the shape of the patient's pupil, round or otherwise, as the case may be, and remains perfectly stationary throughout the test. The shadow alone moves.

“ 3. The shadow is produced by the iris of the observer.

“ 4. The usual crescentic shape of the shadow has its cause in the circular form of the pupil of both patient and observer.

“ 5. Skiascopy is the more accurate the larger the pupil of the patient (provided there is not much aberration in the peripheral zone) and the smaller the pupil of the observer.”

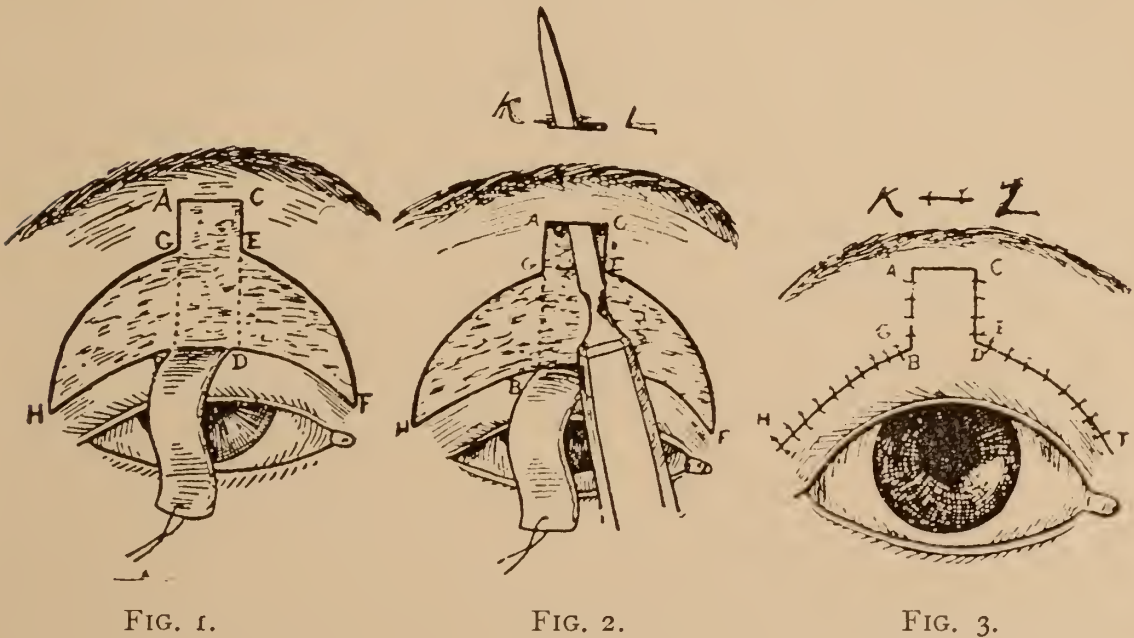
RITCHIE.

**Tansley, J. Oscroft.—An Operation for Cases of Congenital Ptosis.—*Am. Medico-Surgical Bulletin*, February 8, 1896.**

In a paper read before the July meeting of the American Ophthalmological Society, Tansley described the following operation for congenital ptosis, and exhibited a case on which he had performed the same. It is a combination of Panas' and



Von Graefe's operations, and is performed as follows: He commences by making two perpendicular and parallel incisions, AB and CD, a quarter of an inch apart, and extending from the upper orbital margin to within two lines of the free margin of the upper lid. These incisions are united at their upper extremities by a horizontal one, AC. The integument bounded by these incisions is dissected from the underlying tissues, and



allowed to fall down upon a pad of cotton, kept moistened with a warm Panas' solution. (Fig. 1.)

Starting at a point H, two lines above, and a little beyond the external canthus, an incision is then made extending along the free border, and down to the tarsal cartilage until it meets the incision AB at G; starting from a corresponding point E, along the line of incision CD, an incision is carried along the free border of the tarsus, and is terminated opposite the inner canthus and two lines distant from the free margin of the lid at the point F. The extremities of these two incisions are joined with the points B and D respectively, by means of an incision parallel with and two lines distant from the margin of the lid. The tissues embraced within the limits of these incisions are carefully dissected off down to the tarsal cartilage. The cut edges of the incisions HG and EF are united to the cut edges HB and DF, respectively, by means of interrupted sutures.

A Graefe knife was then introduced at C, and carried upward under the integument, and caused to emerge upon the forehead just above the brow, then, by a sawing movement, an incision, KL, is then made parallel to AC, and slightly greater in extent. (Fig. 2.) Through the wound thus made is drawn the ribbon of integument spoken of at the beginning of the article, its end having been previously pierced by a strong suture, to facilitate this step of the operation. Sufficient traction having been made to secure smoothness of the flap, the end is cut off even with the forehead, and fastened to the upper lip of the incision KL, by means of a couple of sutures. The cut surface along the line of the incisions AG and CE are approximated in the same manner, and the application of a protective dressing concludes the operation. (Fig. 3.)

The points of superiority claimed for this over other operations for the same difficulty, are :

1. Perfect raising of the upper lid.
2. Perfect protection of the cornea when the lids are closed.

RITCHIE.

**Knapp, H.—Cavernous Anglioma of the Orbit.**—*Archives of Ophthalmology*, January, 1896.

The history of the case shows a dimness of vision which was first noticed twelve years previous to the patient's applying for treatment, but which disappeared, and was not again noticed until about five years ago, at which time the exophthalmos appeared. This gradually increased, but was unaccompanied by pain, or any inflammatory symptoms.

At the time of examination the eyeball protruded directly forward in the axis of the orbit. Motility was unimpaired, and vision was fairly good. There was an optic neuritis, with marked engorgement of the retinal veins. Palpation afforded no new light. Tumor of the optic nerve was diagnosed.

An operation having been decided upon, he commenced by severing the attachment of the internal rectus, securing it by the insertion of two sutures in the cut end of the tendon. Feeling his way with the scissors, between the muscles and the sclerotic, his progress was arrested by a layer of orbital fat, which, having been removed, disclosed a circumscribed, bluish tumor lying directly behind the eye. The anterior portion was separated

with the curved scissors, while the posterior portion, which was attached to the sheath of the optic nerve, was reached by means of a curved chisel; thus the tumor was removed entire in its capsule. The optic nerve having been drawn forward by means of a strabismus hook, was found to be normal and uninjured. The cut end of the tendon was reattached as in the operation for advancement, giving to the eyes the appearance of slight convergence, although no diplopia was manifest after the operation, and the movements of the eyeball were not interfered with. A few days later the sutures were removed, the eye gradually returning its normal position, and the vision rapidly increasing.

Knapp considered the tumor analogous to the vascular tumors of the lids, it being congenital in its origin. These tumors are not usually encapsulated, but this, owing to its situation and the slowness of its growth, acquired a dense capsule.

The points to be remembered in differentiating the encapsulated form from the non-encapsulated are the absence of pulsation and *bruit*, and also the fact that the exophthalmos is not increased by stooping or coughing.

RITCHIE.

**Seithoff.—Reflex Epilepsy of Nasal Origin.—***Rev. de Laryngol. d'Otol.*, etc., May 15, 1895.

The author reports two cases of epilepsy, cured by intra-nasal treatment. The first, a man of thirty-eight, had suffered for twenty years from well-marked attacks of epilepsy which grew constantly more severe. An examination of the nose showed hypertrophy of the inferior and middle turbinateds and of the crest of the cartilaginous portion of the septum. Application of a ten per cent. solution of cocaine aborted a threatened attack and reduction of the hypertrophic tissue by galvano-cautery resulted in a complete cure.

The second case, a man of thirty-three, had suffered a long time from slight attacks of epilepsy. Three years ago he had a violent attack accompanied by a sensation of extreme fetidness lasting for eight days. Since then the olfactory aura has appeared with every attack. Examination revealed an hypertrophied condition of the inferior and middle turbinateds causing a complete closure of the right side of the nose. Applications of cocaine



caused the disappearance of the odor, and treatment of the hypertrophies was followed, after a time, by the cure of both odor and epileptic attacks.

PEARSALL.

**Kraske.—A New Operation for Difficult Cases of Cleft Palate.**—*Beiträge z. klin. Chir.*, vol. xiv, No. 2.

The case described was one in which the cleft was so extensive that the usual methods seemed of little use. The author, therefore, made use of the inferior turbinated bone, which was separated close to its base from before backward to within one-third of an inch of its posterior extremity. This flap was twisted and stitched to the anterior border of the cleft, and after from ten to fourteen days, when sufficiently strong union had taken place, the pedicle was severed and sutured to the margin of the cleft. For this purpose the author recommends the cold snare.

The structure of the hypertrophied turbinated is well adapted for this purpose, while the blood supply is such as to cause no fear of the death of the flap even though the pedicle be so small. If one turbinated is used, that which causes the greatest obstruction should be selected. If one is not enough both may be used, one being stitched to the anterior margin of the cleft, the other to the posterior margin.

PEARSALL.

**Onodi.—Lipoma of the Tonsil.**—*Rev. di Laryngol.*, 1895, xvi.

A pedunculated tumor of pale yellow color was removed from the left tonsil of a child. It proved to be a pure lipoma. The author claims that no similar case has been reported.

PEARSALL.

**Fage.—Bacteriology of Ozena.**—*Rev. Internat. de Rhinol.* v, 1895.

The writer gives a review of the literature of the subject, and details his own experiments. The microbe may be studied by inoculating the ordinary culture medium with mucus removed from an ozenous nasal cavity, or even by mixing the mucus with sterilized water and staining with one of the aniline dyes. The germ is found in company with other micro-organisms (staphylococci, streptococci, etc.,) but is found in much greater numbers than the others. It is coccus-like in shape, arranged in pairs, and enclosed in a capsule. When examined in a suspended drop, it



appears to be rod-like, with rounded ends, and when stained with aniline the extremities show as two colored points separated by a clear interval. It is decolorized by Gram's solution.

Although characteristic odors are developed in cultures, the author is inclined to believe that they are due, perhaps, to the media employed or to the surrounding conditions. At times pleasing as well as disagreeable odors are produced.

Although there is a strong resemblance between the microbe under consideration and the pneumo-bacillus of Friedländer, they may be differentiated by the fact that the former do not grow in sterilized milk, while the latter thrive well, and coagulate the milk.

The action upon animals inoculated with this microbe proves to the author that it is a pathogenic germ, and he therefore believes that there is a general systematic condition as well as a local lesion.

PEARSALL.

**Secretan.—Laryngeal Herpes.**—*Ann. de Mal. de l'Oriel.*, etc., xxi, 1895.

The author describes this disease as similar in history and symptoms to idiopathic cutaneous herpes. The local symptoms are those of acute catarrhal laryngitis : hoarseness, aphonia, sharp, lancinating pain, and dyspnœa. The vesicles, which may be accompanied or preceded by œdema, are seldom more than ten or a dozen in number. They soon break and form a small erosion covered with white adherent crusts. The erosions may be hemorrhagic. The crusts fall off in five or six days, leaving a simple depression.

The laryngeal manifestation may be accompanied or preceded by the cutaneous disease, or by herpetic eruptions in the pharynx. The prognosis is always good. The diagnosis from diphtheria may usually be made by the clearly defined character of the eruption and the existence of no tendency to confluence.

PEARSALL.

**Arslan.—Rhinitis Caseosa.**—*Arch. Ital. di Otol.*, iii, 1895.

The author narrates a characteristic case and then goes on to discuss the various theories proposed concerning the nature and cause of this peculiar nasal disease. By some it is considered

simply as the result of intra-nasal lesions, such as sinusitis, polyp, syphilis, foreign bodies, etc. Others believe it to be a disease distinct in itself and worthy of special consideration. The writer is of the former opinion, and thinks that the disease should be called "caseiform purulent rhinitis."

It would seem that undue attention had been devoted to this disease, which possesses no evidence of any condition other than what would naturally follow where pus is retained, and, in consequence, loses its watery constituents. The cheesy mass resulting would act as a foreign body and produce quite serious changes in the neighborins tissues.

PEARSALL.

---

## BOOK REVIEWS.

THE TOXIC AMBLYOPIAS : THEIR SYMPTOMS, PATHOLOGY, AND TREATMENT. By GEORGE E. DE SCHWEINITZ, M. D., Clinical Professor of Ophthalmology, Jefferson Medical College of Philadelphia. Very handsome octavo, 240 pages, 41 engravings, and 9 full-page colored plates. Limited edition. De luxe binding, \$4.00, *net*. Lea Brothers & Co., Publishers, Philadelphia and New York, 1896.

In this work the author has given us, in a small space, practically all that is known of the toxic amblyopias. The effects of some eighty-six different drugs upon the visual function are briefly but sufficiently described, and an examination of the large number of authorities quoted will impress upon the reader the enormous labor involved in the preparation of the work.

The toxic agents are divided into ten classes, the grouping having reference to their spheres of action. Under class ten will be found the ptomaines, meat, fish, and sausage poison, and snake poison. One hundred and four pages, or nearly one-half the work, are devoted to amblyopia from alcohol and tobacco, the subject being treated with numerous cuts illustrating the deviations from the normal in the visual field.

The pathology given in the work is well-illustrated by fine plates of microscopic sections of the optic nerve, in various stages of degeneration.

The paper, presswork, and binding are of the finest. The author is to be congratulated upon this valuable addition to the literature of ophthalmology, which no progressive practitioner of this branch of medical science can afford to dispense with.

NEW TRUTHS IN OPHTHALMOLOGY, AS DEVELOPED BY G. C. SAVAGE, M. D., Professor of Ophthalmology, in the Medical Department of Vanderbilt University, Ex-president of National Academy of Medicine, President of Tennessee State Medical Society, etc. Fifty-eight illustrations, third edition, published by the author. Printed at the publishing house of the M. E. Church, South, Nashville, Tenn., 1896.

The success of this book is best attested by the fact that two editions have been exhausted in but little over two years. The present edition is larger than its predecessors by over one hundred pages. Considerable of this space is occupied by the author in further enforcing his opinions respecting oblique astigmatism, and the action of the oblique muscles, and in Chapters II, III and IV will be found his answer to unfavorable criticisms passed upon some of his former statements.

A new chapter, which should be valuable, is that upon the possibility of deferring presbyopia by the rhythmic exercise of the ciliary muscle. The author speaks of the use of this method as a means of delaying the onset of natural presbyopia, and also for correcting the ciliary muscle when intrinsically weak. We should think it might be applied to still another condition, that in which the power of accommodation is impaired by the haphazard use of convex lenses of too great strength for reading. These are cases of not infrequent occurrence where patients have been in the habit of prescribing their own glasses, and we have frequently been obliged, in cases of rapidly increasing presbyopia from this cause, to arbitrarily reduce the strength of the glass worn even at the expense of considerable discomfort for the time being. If this method of training will relieve these cases, it is well worth a trial. In Chapter V will be found additional means for determining and correcting insufficiency of the oblique muscles, placing this branch of the subject upon a firm basis.

Dr. Savage is an original thinker, and his views are always well worth the time spent in their perusal.



LA PRATIQUE DES MALADIES DU LARYNX, DU NEZ ET DES OREILLES DANS LES HÔPITAUX DE PARIS. Aidedémemoire et formulaire de thérapeutique appliquée, par le Professeur PAUL LEFERT. 1 vol. in-18 de 288 pages, cartonné. Paris, J. B. Baillière, et Fils, 1896.

This little manual is somewhat of a new departure. In it are presented the methods of treatment of the diseases of the nose, throat, and ear, as practiced by the physicians in the hospitals of Paris. Among those quoted are Dujardin-Beaumetz, Menière, Schwartz, Gouguenheim, Dieulafoy, Périer, Panas, Gellé, Barattoux, and many other well-known men.

The diseases are arranged in alphabetical order, and under each caption is given the treatment for the disease under consideration, as used by from two to five different physicians. The description are concise and the little book is useful as presenting the various opinions of prominent practitioners.

COLOR-VISION AND COLOR-BLINDNESS. A Practical Manual for Railroad Surgeons. By J. ELLIS JENNINGS, M. D., (Univ. Penna.), formerly Clinical Assistant Royal London Ophthalmic Hospital (Moorfields); Lecturer on Ophthalmoscopy and Chief of the Eye Clinic in the Beaumont Hospital Medical College; Ophthalmic and Aural Surgeon to the St. Louis Mullanphy and Methodist Deaconess Hospitals; Consulting Oculist to the Missouri, Kansas, and Texas Railway System; Fellow of the British Laryngological and Rhinological Association; Secretary of the St. Louis Medical Society. Illustrated with one colored full-page plate and 21 photo-engravings. Crown octavo, 110 pages. Cloth, \$1.00 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street, 1896.

The object of this little volume is to enable the general physician to qualify himself for examination of anomalies of the color sense and the visual field in general. It is admirably adapted to this purpose, being clear in statement, terse in style, and presenting only so much of the theory upon which the study is based, as is absolutely necessary to a proper elucidation of the subject.

The worsted tests of Holmgren, Thompson, Oliver, and the author are explained, and the tests by means of the spectroscope, the polariscope, Stilling's plates, Donder's lantern, etc., are given.

In the concluding chapters are presented the Pennsylvania R. R. Company's instructions for the examination of employees, and the series of tests arranged by Oliver for general use in the railway service.

The book is neat and substantial, and should be very useful to those engaged in this branch of work.

LES OPHTALMIES DU NOUVEAU-NE. By E. VALUDE, Medecin de la Clinique National Ophthalmologique des Quinze-Vingts 16mo, pp. 144. Rueff et Cie., Paris, 1896.

In this little book may be found a thorough and elaborate study of the eye troubles of the newborn. The book is divided into two parts, of which the first is devoted to purulent ophthalmia, its symptomatology, pathology, and treatment ; catarrhal conjunctivitis and the various forms of pseudo-membranous conjunctivitis, The second part takes up the lesions of the cornea, conjunctiva and lids which may follow ophthalmia neonatorum. The purulent form of ophthalmia is treated more at length on account of its great importance and the serious character of its sequellæ.

TRAITEMENT DES MALADIES DES YEUX, NOTIONS PRATIQUES. By A. TROUSSEAU, Medecin de la Clinique des Quinze-Vingts. 16mo, pp. 163. Octave Doin, Paris.

The author gives in a very concise way and in small space, the principal characteristics of those diseases of the eye most frequently met with in general practice, together with the treatment that has proved most useful. All theorizing and all doubtful methods of treatment are omitted, the object being to give to its readers a clear, simple, and practical book.

THE FUNCTIONAL EXAMINATION OF THE EYE, by JNO. HERBERT CLAIBORNE, Jr., M. D., Adjunct Professor of Ophthalmology in New York Polyclinic, Instructor of Ophthalmology in the College of Physicians and Surgeons in New York, etc., etc. With 21 illustrations. Philadelphia : The Edwards & Docker Co., 1895.

Dr. Claiborne's book represents the substance of his course of lectures on practical refraction, as delivered in the institutions with which he is connected.

It is devoted to the explanation in the briefest manner consistent with entire clearness of the exact methods to be adopted in conducting scientific investigations of the various anomalies of refraction and accommodation.

The patients are presented to the reader, their symptoms are given, the principles upon which the examinations are based are

explained, and the various methods of reaching a correct conclusion are presented.

There is a chapter on mydriatics, and Jaeger's and Snellen's test types will be found at the end of the book.

The work is exceedingly practical, and should be very useful to the student of this branch of ophthalmic science.

A TEXT-BOOK ON NERVOUS DISEASES, by American Authors, edited by FRANCIS X. DERCUM, A. M., M. D., Ph. D., Clinical Professor of Nervous Diseases in the Jefferson Medical College of Philadelphia, President of the American Neurological Association, with 341 engravings and 7 colored plates, pp. 1056. Philadelphia, Lea Bros. & Co., 1895.

It affords us pleasure to present for the consideration of our readers a work upon this subject which is thoroughly American, and particularly so because of its general excellence. The eminent medical gentleman who have contributed to the volume before us have done themselves and the profession great credit. Of the editor, Dr. Dercum, it must certainly be said that he has done his full share of the work, having contributed five entire chapters, those upon Neurasthenia, Diseases of the Membranes Sinuses and Brain Tissues, Cerebral Palsies of Childhood, Paretic Dementia, and Syphilis of the Nervous System, beside the first chapter on "General Considerations," written in collaboration with Dr. H. Weir Mitchell; and it is no disparagement to the able writers associated with him, when we say that his work will bear comparison with any in the book.

It is impossible to give a critical review of the whole work in these pages, but mention must be made of the chapter devoted to the "Anatomy of the Cerebral Cortex, and the Localization of its Functions," by Dr. Charles K. Mills. When the limited space occupied is considered, this is one of the very best presentations of this difficult subject with which we are acquainted. The author is clear, concise, and able throughout.

Of the departments covered by the JOURNAL, under the head "Diseases of the Cranial Nerves" the affections of the optic, oculo-motor, pathetic, and abducens nerve are treated by Dr. de Schwenitz in a very acceptable manner; the section on the iris and the ciliary muscle being particularly good.

Dr. Oliver also contributes a section on "Examination of the



Eye," in the first chapter, which is quite sufficient for the purposes of the neurologist.

The departments of the ear, nose, and throat are included in the second chapter on cranial nerves, under the charge of Dr. Herter.

Among other contributors may be mentioned such prominent names as Landon Carter Gray, Chas. L. Dana, W. W. Keen, M. Allen Starr, and Wm. Osler, the mention of which is a sufficient guarantee of the excellence of their work.

This volume is a distinct addition to American medical literature, and will hold its own with the best.

CLINICAL LECTURES ON DISEASES OF THE NERVOUS SYSTEM, Delivered at the National Hospital for the Paralyzed and Epileptic, London, By W. R. GOWERS, M. D., F. R. S. Philadelphia : P. Blakiston & Co., 1012 Walnut Street, 1895. Price \$2.00.

If all works on diseases of the nervous system were as interesting and readable as this, this branch of medicine would be shorn of its terrors for the student. The book is made up from a series of lectures delivered by Professor Gowers, which have been collected from the English medical journals in which they were originally printed. They are written in an easy colloquial style, and there is not a page that is not well worth the reading. The subject is treated clinically, in many instances illustrative cases being introduced. The chapter on optic neuritis is a most excellent description of the disease, and contains numerous hints which will be valuable to the novice in this line of work.

ELECTRICITY IN ELECTRO-THERAPEUTICS. By EDWIN J. HOUTON, Ph. D., and A. E. KENNELLY, Sc. D. Elementary Electrical Series, pp. 412, with 120 illustrations. Price, \$1.00. The W. J. Johnston Co., 253 Broadway, New York.

This little book is hardly in the line of the work of the JOURNAL, but its clearness of statement, conciseness, and general excellence are a sufficient excuse for its presentation in these pages. It has no special relation to medical practice as such, but is a treatise on the fundamental electrical principles of electro-therapeutics, explaining the science of electricity in simple language, which may be understood by all. Its authors are well-known electricians,

and are therefore able to speak authoritatively upon the subjects of which they treat. The varieties of electro-motor force, electric resistance, the different currents and the various cells, are succinctly described, the necessity for, and the uses of the separate parts of batteries used in medical practice, are explained.

A chapter is devoted to electrolysis and cataphoresis, and the final chapter treats of the dangers in the therapeutic use of electricity.

The book is just such a one as every physician should read as a preparation for the use of electricity in practice. It is printed on excellent paper, neatly and substantially bound, and we cordially recommend it to all requiring such a work.

---

### ITEMS.

—Dr. F. G. Ritchie, Associate Editor of this JOURNAL, who for the past three years has held the position of Resident Surgeon of the New York Ophthalmic Hospital, Twenty-third Street and Third Avenue, has removed to 134 West Forty-seventh Street. Dr. Ritchie still maintains his connection with the hospital, being a member of the attending staff.

—Dr. J. Davidson Lewis, late Assistant Surgeon to the New York Ophthalmic Hospital, has removed from 124 East Twenty-fifth Street, New York, to the Germania Bank Building, St. Paul, Minn.

—Dr. Robert G. Reed, of the Class of '95, College of the New York Ophthalmic Hospital, has removed from Bellefontaine, O., to Louisville, Ky., where he has been called to fill the chair of ophthalmology and otology in the University of Louisville, recently rendered vacant by the death of Dr. Geo. W. Redmon, Class '94, College of the New York Ophthalmic Hospital.

—Dr. J. B. Palmer has received the appointment of Resident Surgeon of the New York Ophthalmic Hospital.

—Dr. E. S. Munson, late Resident Physician of the Five Points House of Industry, has been appointed Assistant Resident Surgeon of the New York Ophthalmic Hospital.

—Dr. J. Frank McGuire has removed from Alpena, Mich., to 106 Miami Avenue, Detroit.

# THE JOURNAL OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

---

EDITOR.

CHARLES DEADY, M. D.

ASSOCIATE EDITORS.

F. G. RITCHIE, M. D.

CHARLES E. TEETS, M. D.

WM. S. PEARSALL, Ph. B., M. D.

---

## A CASE OF LIGATION OF POST-AURICULAR VESSELS FOR THE RELIEF OF TINNITUS AURIUM.

BY HOWARD P. BELLOWS, M. D., BOSTON, MASS.

JANUARY 31, 1894. —Mrs.——, aged forty-eight, apparently in excellent general health, complains of an annoying tinnitus, of about three months' duration, which is limited to the left ear, but shows a tendency to increase, which occasions considerable apprehension and alarm. The character of the noise when first noticed was that of trains moving in the distance, and the puffing of locomotives. It was some time before it was discovered that these sounds were not real, as trains pass within hearing distance of her home. For two months past an undefined feeling of distress or uneasiness has been felt in the region back of the left ear. One month ago, on the second day of a severe cold, accompanied by determination of blood to the head, and severe paroxysms of coughing, choking, and sneezing, she noticed an increase in the tinnitus, which came, in the course of a few hours, to assume a beating and "breathing" character, which has continued ever since. There was no vertigo either at the time of this development or since. At first this sound was modified, or even stopped momentarily, by movements of the head, but latterly there is but one mode of relief, and that is obtained by pressure upon a spot which lies on a level with the floor of the external meatus, and one inch posterior to the attachment of the auricle. Light pressure at this point transforms the "breathing" sound into a



pounding noise, but strong and steady pressure causes a total cessation of all sounds as long as the pressure is maintained. There is no tenderness, swelling, redness, nor any other objective signs at the spot indicated. She has never been subject to headaches, and has had no severe sickness for many years, save an attack of peritonitis two years ago, followed by nervous prostration. At that time an oversensitiveness of hearing developed, in both ears alike, which has continued ever since. It was also noticed that during two pregnancies the hearing became abnormally acute. For two years past there has also been frequent epistaxis from the left nostril, recurring sometimes two or three times a day. The ear has throughout been entirely free from pain, and there has never been autophony. Examination shows tympanic membrane and external canal perfectly normal. Throat and nose very slightly catarrhal. Fork from vertex heard alike on both sides, and air conduction is better than bone, on both sides. Hearing distance, for a forty inch watch, on the right side six feet and on the left seven feet.

February 22.—Tinnitus rather upon the increase. Pressure upon the spot previously described still causes entire cessation of all sound. At this spot pulsation can now be distinctly felt by the finger. Ordinary modes of treatment have failed to produce any effect upon the condition, likewise treatments by electricity and the exhibition of gelsemium and belladonna. Hearing distance, for forty inch watch, fourteen feet both right and left.

February 27.—The beating increases, pressure has less effect, and the spot where it is applied is becoming painfully tender. The patient is growing nervous, and is rarely free from consciousness of discomfort. This morning the tinnitus is distinctly objective, and the beating can be heard without difficulty through the otoscopic tube, both when inserted within the auditory canal and when held in contact with the pulsating area. Advised ligation of the pulsating vessel at once.

March 3.—The operation proposed was performed this morning by Dr. Horace Packard. The exact point at which the pulsation was felt was marked with nitrate of silver upon the skin previous to etherization, and the parts were well shaven and rendered aseptic by the usual methods. An external incision two inches in length was made, beginning at a point on a level with the superior wall of the external meatus, and about one-half

inch posterior to the attachment of the auricle, and running obliquely downward and backward. A large vein, apparently, was divided high up in the incision and secured by forceps. Deeper dissection disclosed no artery, but pulsation was plainly felt beneath the finger. The fascia of the sterno-cleido-mastoid muscle was reached, and the pulsation was felt still deeper. Beneath the fascia, by continued careful dissection, a number of enlarged veins, apparently, were encountered, crossing each other in such manner that it was found necessary to successively ligate and divide three of them in order to proceed deeper. Upon the ligation of the last of these vessels, and after the exploration had extended a full half inch within the muscular tissue, no further pulsation was evident, either at the bottom or around the sides of the incision. Upon closing the wound there was quite profuse venous hemorrhage again following the removal of the forceps at the upper end of the incision. This was controlled by a deep stitch. The ligatures being catgut, the entire wound was sewed up and sealed. The operation took about one hour, and was performed by Dr. Packard with the utmost patience, care, and skill throughout. The failure to find an artery, and the entire cessation of pulsation upon the ligation of the cluster of enlarged venous vessels, was naturally a source of no little surprise in this case, and the result of the operation was awaited with still greater interest in consequence of this unforeseen peculiarity.

March 16.—The wound has healed by first intention. For eight days following the operation there was total cessation of all tinnitus. Within the last four or five days there has been heard, a few times, a momentary sound resembling the former noise, but not in the old locality. It seemed to be directly above the auricle, and was quickly stopped by a turning of the head or pressure of the hand.

March 19.—The slight tinnitus above the ear has not returned, and there is perfect quiet back of the ear. Two days ago, however, upon over-exerting herself in climbing two particularly hard flights of stairs, she became conscious of a beating tinnitus deep within the ear, upon the left side alone, and at the same time a slight coldness, which had existed around the ear since the operation, gave place, under the stress upon the circulation, to a heated feeling, which still continues.

March 27.—Reports by mail: "I hear a slight noise in the afternoon and evening, or after I have retired for the night. This noise is not continuous, and I think not any worse than a week ago."

May 2.—Patient called. Has entered the climacteric period (at forty-eight years of age), and for last three weeks has had increased pulsating about the left ear. Throbbing can be felt and heard at various points, and pressure upon these changes the tinnitus in a very marked degree. Hearing right and left still fourteen feet for a watch which is normally heard at forty inches.

December 8, '95.—Patient called. General health excellent, but tinnitus worse; vessels pulsating all about the region back of the ear on the left side, but not at all upon the right. Has taken erigeron, cimicifuga, macrotin, and glonoin without avail.

April 5, '96.—In reply to a letter of inquiry from me the patient writes: "My head has been much worse some of the time since I saw you last, but rather suddenly, about the first of January, it began to improve, and now no noise can be heard by listening back of the ear, and during the day, while moving about, I hear no noise myself. At night, when lying down, I feel, rather than hear, a deep beating, in time with the pulsating of my heart. My hearing has never been affected by the noise. I think it is just as acute as when you last tested it. I am encouraged to feel that, in time, what little trouble I now have will wholly disappear."

It is needless for me to add that should this most desirable state be reached, the result can in no way be attributed to the operation which was performed, the effect of which was a temporary benefit only, the tinnitus returning in other localities, and in even more distressing degree, as soon as the establishment of collateral circulation threw the stress upon other vessels.

As far as I have been able to ascertain, there are but two cases upon record in which ligation has been resorted to as a means of relief from tinnitus aurium, and both of these have come to my knowledge since the operation above detailed. The first of these was operated upon at the Ear Clinic of Professor Schwartze, in Halle, and is reported by Dr. Carl Grunert in the *Archiv für Ohrenheilkunde*, vol. xxxv., pp. 226 and 227. The operation was performed in the winter



of 1892, and consisted in the ligation of the left common carotid artery, in a young man of twenty-one, for the relief of a violent beating tinnitus, synchronous with the pulse; the indication for operation being the complete cessation of the tinnitus upon digital compression of the artery. The operation afforded such relief that for a time the beating became almost inaudible. The benefit was not permanent, however, and in about four months the tinnitus had returned in nearly its former intensity. I met and questioned this patient last October at the clinic in Halle, nearly three years having then elapsed since the operation, and he assured me that the tinnitus was then, and had long been, as bad as before the operation was performed. The second recorded case is referred to in the *Archives of Otology*, for January, 1896, in a synopsis of a paper by Drs. Goldflam and Meyersohn in the *Wien. med. Presse*, Nos. 17, 18, 1895. It was a case of objective tinnitus, the sounds synchronous with the pulse, and stopped by compression of the left common carotid. The artery was ligated, but in four hours the sounds returned.

In conclusion it must be stated, therefore, that in the very limited experience thus far obtained from the use of the ligature for the relief of tinnitus aurium, the results have not been permanent, the tinnitus recurring as soon as collateral circulation is fairly established.

## MALIGNANT PSEUDO-PLASMS OF THE ORBIT.\*

BY PROFESSOR PANAS, PARIS, FRANCE.

IN glancing over the annals of science, one is struck with the frequent occurrence of cases of exophthalmos accompanied by so-called *malignant* tumors, where the appearance of an intercurrent erysipelas, or some medical treatment instituted either intentionally or by chance, has caused the disappearance of the tumor. Almost always, and very often wrongly, the inference of syphilitic disease of the orbit is drawn.

As a disease, *infectious* in a very high degree, syphilis is certainly very frequently a cause. But, as mercury and iodide of potassium are apt to induce resolution in other than syphilitic tumors, the predication of syphilis is not warranted in default of all other specific manifestations, and only on account of fortunate therapeutic results. That this is ordinarily done may be easily seen by consulting recent works on the subject, among others, those of Wracek (*Zur Syphilis der Orbita*, Weiner Klin., 1886; Campana (*Giorn. ital. della malverenee*, 1871); Galezowski (*Rev. d'opht.*, 1886); Haltenhoff (*Ann. d'ocul.*, 1889); Hennebert and H. Cooper (*Ann. de dermat. et syphiligraphie*, March, 1895). In this last work the diagnosis of syphilis is based upon cure by means of mixed treatment, and upon the existence of naso-pharyngeal cicatrices, such as are seen in old cases of ozena with no syphilitic contamination whatever.

A recent paper by Esmarch, in the *Société Allemande*

\* Communication faite au congres de Londres, aout, 1895. *Rev. Gener. d'Ophtalmol.*, No. 10, 1895.

*de chirurgie* (April, 1895), does not seem to be any more exempt from valid objection. The author enumerates cases of *sarcoma* and *lymphadenoma* of syphilitic origin as having responded to specific treatment.

He relates no less than forty cases, which is very delightful. As far as he is concerned, the diathesis may be either hereditary or acquired. The cranium seems to be their most frequent location and point of return after rapid extirpation. The tumors in question yield, on the contrary, to treatment by iodide of potassium, arsenic, the appearance of intercurrent erysipelas, and under the action of injections of toxins. The histological examination, showing the presence of granular tissue with points of fatty degeneration and proliferation of the vascular walls, being, according to the author, of great diagnostic importance.

This method of interpreting clinical facts, which is also followed by Krause, d'Altona (*l. c.*) in regard to analogous tumors,—among others, one located in the nasal fossæ, cured by iodide of potassium,—is no longer valid when one begins to recognize that a whole category of reputed malignant tumors is clearly independent of syphilis.

From our view, these neoplasms, whether they be lymphomatous, sarcomatous, or syphilomatous, merit further study relative to the dyscrasia produced by toxins.

The principal infections, microbes or toxins, act through the venous anastomoses and lymphatics, or after penetration of the entire organism. From this point of view there would be only one class of *infectious tumors*, of which the syphilomata would be one, but not the only variety.

From considerations of this character we would be drawn to regard orbital neoplasms, especially those that are symmetrical, in a new light, due to clinical observation.

The impetus toward this line of thought was given by a patient whose case was presented in one of my clinical lectures at the Hotel-Dieu (*Semaine med.*, Jan. 23, 1895).

There was a double exophthalmos, likely to be mistaken for sarcoma, which was entirely cured under arsenical treatment in



the form of arsenite of soda. On the contrary, the iodide of potassium, administered previously by a colleague, had the effect of increasing the volume of the tumor as well as the exophthalmos.

The patient, a vigorous man of thirty-five years, was absolutely exempt from all syphilitic taint, although there had existed for years a certain degree of ozena accompanied by epistaxis.

In order to explain the double exophthalmos with fixation of the ocular globes, papillary stasis and reversely the *lardaceous chemosis* of the lids, we admitted a microbic infection of the cellular tissue of the orbit due to the microbes of ozena from the nasal fossæ.

An interesting point to note was that each tumor, of *hard* consistence, had for its principal site the internal or nasal wall of the orbit, and there was present external bilateral strabismus.

Since then we have been able to observe a young woman, non-syphilitic, but having sarcomatous polypi in the left nasal fossa. The polypi having been removed, there appeared an exophthalmos affecting the left side, with marked external strabismus. An operation showed that the case was not one of sarcoma of the orbit, but of induration of the cellular tissue, with destruction of the labyrinthine mass of the ethmoid. On the other hand, histological examination of a fragment of the nasal polypi proved that it was composed of pure adenoid tissue having no sarcomatous character. To explain its extension to the side of the orbit, we have suggested that at some time the repeated pulling away of the nasal polypi was accompanied by an infectious process, which was propagated toward the cavity of the orbit.

Moreover, this patient was placed under arsenical treatment, which has ameliorated her condition, and up to the present time has preserved the vision of the affected eye.

In speaking of cases of this kind we are reminded of those published by others under divers titles.

Should these facts not prove instructive, we have had the good fortune to speak with Professor Duplay and our colleague in surgery, Schwartz, who have related the following cases :

In a lad of fifteen years, employed by a wine merchant, strong,

and not syphilitic either by acquisition or inheritance, there appeared a neoplasm of both superior maxillary bones. On account of the *bilateral* character of what appeared to be a sarcoma, as well as the *youth* of the patient, M. Schwartz tried internal treatment with Fowler's solution before proceeding to operation. At the end of a few weeks the tumors were completely reabsorbed, proving that they were not of a malignant nature.

M. Duplay's case was an adult Brazilian, who had a voluminous tumor of the iliac fossa, presenting all the characteristics of an abdomino-pelvic sarcoma, adherent to the bone. Judging that the case was incurable, and *titre de medication morale*, as well as to relieve the pain, he prescribed tincture of conium maculatum; what was his astonishment to hear from the patient's physician three or four months later, that under the conium, long claimed to be anti-cancerous, and much praised by Trousseau, the tumor had entirely melted away.

Lately we were called in consultation with Professor Grancher by Dr. Kalt, concerning a little girl ten years of age, of good constitution, and absolutely exempt from all antecedent syphilis either personal or hereditary.

In April, 1895, there appeared at the inner superior angle of the right orbit, behind the lachrymal sac, a soft tumor about the size of a small walnut. This tumor, preceded by frontal pain, was adherent by a broad base to the bone, and also to the rectus internus muscle, and presented the reflex signs of abscess.

On the fourth day after its appearance M. Kalt made an incision, which proved to him the fleshy character of the mass. Having extracted a small fragment, it was found under the microscope to be made up of round cells resembling those of sarcoma. In spite of its histological character, and although no manifestations of syphilis were present, mercurial frictions with internal treatment by iodide of potassium were prescribed by common consent. Six weeks later the apparent sarcoma was entirely absorbed. One peculiarity noted was that, accompanying the evolution of the orbital tumor, there was, for a single day, a discharge of pus from the corresponding naris. The frontal sinuses hardly being in existence at the age of this patient (ten years), we would ask ourselves if the point of departure was not the ethmoid cells producing obstruction by infection of the parts

adjacent to the periosteum and cellular tissue of the orbit, which became infiltrated with migratory cells. It would not be astonishing that absorption should have taken place under the influence of the iodide combined with mercury, without the predication of syphilis, of which no trace was found.

Who does not know the celebrated case of General Radetzki related in Mackenzie's work, where a chronic indurated phlegmon of the orbit was mistaken by the most celebrated ophthalmologists of the period for a malignant tumor, which terminated in the spontaneous cure of the patient? We ourselves have observed a case of the same kind in the service of Velpeau, who was mistaken in his diagnosis up to the time when the patient, a child of fourteen years, was cured after an evacuation of pus. An exploratory incision giving negative results had confirmed Velpeau in his error for more than three months.

Professor Gayet (*Rev. gen. d'Ophtalmologie*, 1886 et 1888), presents the case of a man of seventy years, who had a double exophthalmos, no cause for which was known. He believed that he ought to refer symmetrical tumors of the orbit to the lymphadenoid group. Bibliological research, however, led him to class his case with those published by Arnold, O. Becker, Leber, Reymond of Turin and Ostwalt. On the other side, Delens published, in the *Archives d'Ophtalmologie*, 1886, a double orbital lymphadenoma which disappeared in the course of an attack of cholera.

This conception of lymphadenoma as a product of *infectious* origin, appears to us all the more probable since treating a young patient who was attacked with lymphosarcoma of the pharynx, following the attempted removal of adenoid vegetations of the naso-pharynx by a *confrère*. Our assumption becomes transformed to certainty by P. Delbet's paper on the experimental inoculability of lymphadenoma (*Academie des sciences*, 17 juin, 1895). In view of the importance of this work, we would beg permission to give a *résumé* of it.

The proof of the infectious nature of lymphadenoma, says Delbet, is based upon the reproduction in dogs, of the



disease peculiar to man, by inoculation of pure cultures of a special bacillus.

He selected a woman suffering from general lymphadenoma, splenic in character. Having drawn the blood from the spleen with a Pravaz syringe, the experimenter inoculated dogs with the pure colonies in several places, and in massive doses. The only animal that was killed was inoculated on May 16, again on the 18th, and then at varying intervals until he was sacrificed; part of the injections being made in the peritoneum, and part in the cellular tissue.

The animal, which weighed nine kilograms, grew thin, to the extent of losing two kilograms in fifteen days.

At the autopsy, the ganglia of the mesentery and mesocolon, those of the right groin, and of both axillæ, were found to be considerably enlarged. In order to overcome the objection that the polyadenitis might not have had a specific character, he has made cultures with the glands of dogs, and has been able to prove the presence in its pure state of the inoculated bacillus, then that it was absent in the blood of the sacrificed animal. Delbet promises ultimately to publish the complete biological study of the bacillus causing lymphadenoma.

Among tumors of the orbit, either unilateral or bilateral, we must note those having for their primary seat the lachrymal glands. Several varieties are known, having for their cause general infectious conditions, such as gonorrhea, the eruptive fevers, influenza, leucocythemia, mumps, and perhaps syphilis. They have the peculiarity of being bilateral, and of being often accompanied by engorgement of the parotid and submaxillary glands. In a certain number of cases, as in one of my lady patients, uterine troubles due to menopause, and hemorrhagic complications from fibro-myoma of the uterus, have been the point of departure. We believe that in these cases an infectious state of the organism is shown by the fact that, after the disappearance of the engorgement of the lachrymal glands, there remains a double plastic choroiditis.

Another no less interesting fact which seems appropriate was recorded in the *Semaine medicale* of this year (January 23, 1895), concerning an acute double dacryo-adenitis occurring in an adult. The search for a possible cause of infection led to the discovery of a tonsilitis; one tonsil, being still swollen and secreting, furnished a pus full of streptococci.

Who does not recall the interesting case cited by Eals and Jonathan Hutchinson (*Ophth. Soc.*, U. K. IV, p. 36, 1884), where cure was obtained through iodide of potassium and mercury? The case of the latter author related to an inhabitant of Calcutta, who came to London with double exophthalmos, accompanied by swelling of the lachrymal, parotid, and cervical glands.

From the facts and reflections contained in this paper, we may be permitted to draw a certain number of conclusions. If these conclusions are not definite, they have the advantage, at least, of attracting the attention of clinicians, and of being, I hope, profitable to their patients :

I. In the presence of a tumor supposed to be sarcomatous in character, it is necessary, even though confirmed by histological examination, to seek the original infection, and to have recourse to operation only after previous treatment has proved fruitless.

II. Among the means of treatment at our disposal may be noted mercury, iodide of potassium, arsenic, and the toxins, by such methods as have been attempted with erysipelas and pure cultures of streptococcus by Fehleisen (*Das Erysip.*, Berlin, 1883), Holst (*Ann. de l'Inst. Pasteur*, p. 243, 1888), and Coley (*The Amer. Jour. of Med. Sciences*, May, 1893).

Lassar (*Deutsch med. Woch.*, November 29, 1891), Spronk (*Ann. de l'Inst. Pasteur*, p. 833, 1892), W. B. Johnson (*N. Y. Med. Rec.*, No. 17, 1894), Coley (*Am. Jour. of Med. Sciences*, July, 1894), and Répin (*Rev. de Chir.*, p. 465, 1895), have clung to the employment of the less dangerous streptococcic serum, the toxicity of which they increase by addition to the cultures of the micrococcus prodigiosus. The

injections are made in the tumor some distance beneath the skin, or in the veins.

III. The researches concerning the point of origin of the infection (nose, ethmoid, or pharynx) and the bacteriological determination of the toxins which are the cause, contribute to the formation of a diagnosis, and to the determination of a basis of rational medical treatment.

Surgery, so often powerless in these pretended sarcomata and lymphadenomata of the orbit, should only come afterward.



## TWO IMPORTANT DISCOVERIES IN THE TREATMENT OF DIPHTHERIA.

BY J. J. FOX, M. D., FLUSHING, N. Y.

HAVING been annoyed for four days with an aphthous sore on the inner side of the lower lip, I had it cauterized by the sun's rays, using for that purpose an ordinary reading glass. The application was repeated for a few moments at a time. The relief was instantaneous and permanent, as I was not again conscious of its existence.

Shortly afterward I was called to see a lady patient who desired to attend a wedding on the following day, but on account of a number of painful ulcerations about an inch and a half in extent on the mucous surface of the lower lip and gum, she was unable to either eat or talk without suffering severe pain. The day being a bright one enabled me to cauterize the whole abraded surface with the solar rays. Each application caused a momentary burning and stinging sensation.

About one minute's treatment was given ; she then looked up and exclaimed, " Why, doctor, all the pain has gone ! " Later she reported that it had never returned after the treatment, that she had attended the wedding, and, if eating and talking were any criterion to go by, she had a splendid time.

Unlike other forms of cautery, no pain or soreness following its application, its prompt action suggested to me its use in the treatment of all ulcerated surfaces of the mouth and throat, as well as cancer and diphtheria.

Later on I was called to attend a boy suffering from the last named disease. Already the membrane had involved the greater portion of the throat. As proof of the true nature of his disease, I was informed by his mother that she had but a short time before

been in contact with a child who had died from diphtheria. A culture was taken from the throat and it was pronounced by the Board of Health to be a genuine case of diphtheria.

The following day being bright, I succeeded in cauterizing the entire throat, membrane included, with the solar rays, using for that purpose an ordinary reading glass with a lens about four inches in diameter.

The next morning I was surprised to find that the progress of the disease had been not only checked, but that a portion of the membrane had come away. In a week's time he was convalescent.

Shortly afterward his mother was taken down with the same malady. In addition to the general treatment given, I cauterized her throat twice in the same way. I afterward found the progress of the disease had been stayed. She in a like manner made a prompt and good recovery.

In still another case, I found that, though the membrane did not come away as promptly as it did in the above mentioned ones, and although more protracted, its growth was held in check by the daily application of the solar cautery.

While this method of treatment has two very serious drawbacks, such as a want of sunshine when needed, and the inability to apply it to the parts involved for a sufficient length of time to make the treatment efficacious, especially in the case of children, it can frequently be used, particularly in hot climates.

I have never known the solar cautery to be employed in the treatment of diphtheria, though I have used it upward of two years, conditions permitting, and always with good local effects.

Recently it has been determined by careful scientific experiments that when sunlight is passed through a spectrum and allowed to fall upon a field of bacilli, that those exposed to the blue, and more especially purple rays, were destroyed in large numbers.

In employing direct sunlight as a cautery, we not only get a focalization of all the rays, purple and blue included, but concentrate them with great power upon any spot desired.

We are thus enabled to instantaneously destroy all forms of bacilli. Whether a blue or purple lens would prove still more powerful remains to be determined.

THE COLD SPONGE BATH IN THE TREATMENT OF  
DIPHTHERIA.

When called to see a little girl about nine years of age, an examination disclosed a diphtheritic membrane forming on both sides of the throat. Being a cloudy day in midwinter the solar cautery could not be employed.

By nine o'clock in the evening her temperature was 104° F., and she was unconscious. It was with considerable difficulty that I was enabled to examine the throat, as she would bite the handle of the spoon in her delirium. I found that the membrane had spread over the entire throat, and was rapidly turning dark, breath very offensive, while the face and surface of the body had a bluish, mottled appearance.

As a whole it looked like a very hopeless case. I so informed the parents, and they readily agreed with me. It certainly seemed as if the child would be dead before morning. In the presence of such a case I submit that the doctor depending alone on medicine is perfectly helpless.

Now in all that I ever heard or read concerning the treatment of diphtheria, no word has ever been mentioned of cold baths being employed. Yet on the spur of the moment I ordered the child to be stripped and laid between blankets, and then called for a towel and basin of cold water. The mother was then directed to wring the towel out in the water and bathe the child from face and throat down to the feet, arms included. She was then turned face down, and the bath given in a like manner from head to feet, the spine being vigorously rubbed. She was next wrapped up in the blankets, arms extended by her sides. While the bath was being given I noticed the face flushed, denoting a good reaction. During all this time she was unconscious, and showed no indication of discomfort. In a short time following the bath the delirium had subsided. I ordered it repeated every half hour during the night. In the morning I was astonished at the change in her appearance. Indeed, her entire condition indicated a transformation. Her temperature was about normal; she was perfectly rational; pulse full and strong. Patches of the



membrane had already come away, and what remained was white-looking, compared with its appearance on the previous evening, as though it had been washed. Her mother informed me that she had been given sixteen baths in the past eight hours, and notwithstanding it was a bitter cold night, and that the water pipe was frozen in the room, the patient began to perspire soon after the first bath was given. Each time she rubbed her off dry before repeating the bath, and yet instead of checking it, the sweat became more and more profuse, until great beads of perspiration stood out on her face and body. I then ordered them to be continued every hour only, and later on only every three hours.

She continued to improve rapidly, and in the course of five days was convalescent. Immediately after the premises had been fumigated her little sister returned home, but did not contract the disease.

CASE II. This proved to be a typical case of laryngeal diphtheria—that form of this complaint which strikes terror to all who understand its true significance.

The patient was a little girl seven years old. She had been sick a few days before I was called. An examination of the throat revealed membranous patches on the lower portion of each tonsil extending downward to the larynx. She could only answer my questions in a whisper. Her breathing was stridulous, and could be distinctly heard in any part of the room.

This patient was environed by the worst possible conditions, the premises not being fit for human habitation. The mother was a poor, hard-working woman. I informed her of the nature of her child's disease, as well as her apparently hopeless condition, also that our only chance of saving her life was to give her cold sponge baths, which she did.

It was rather hard at first to start the perspiration, but eventually we succeeded. The baths were continued every half hour for three days and nights: possibly she might have missed giving them a few times during the night only. Although this case was a desperate one in the extreme, from the time the baths were given, the disease was held in check. For the next few days they were given at intervals of one to two hours during the day, and three hours at night; at the end of that period, being called out of town, my partner Dr. Gill took charge of the case. The following is a record of the same while under his care.

"When I first took charge of the child the real virulence of the disease had abated. She was still unable to speak a loud word, and greatly troubled with a strangling cough.

"Being much reduced, I ordered brandy and milk, and gave Hensel's Tonicum four times a day.

"One morning I arrived just after she had had a coughing spell, and found she had ejected a mass of membranes. Up to this time the baths had been given at intervals of three hours. Following this she made a rapid recovery. During my treatment I continued the indicated remedies, still I am convinced beyond a peradventure that if it had not been for the baths employed, she would have succumbed to the disease."

CASE III. The patient was a very fleshy boy about twelve years of age. I found the exudation in the throat to be unlike any I had ever before seen. It was hard, dry, and elevated above the surrounding tissue. In fact, the subcutaneous mucous tissue beneath it caused the membrane which covered it to stand out like an embossed surface, its edges adjacent to the healthier parts being highly inflamed.

The extent of the formation, considering the short time that had elapsed from the time he began to complain to the time I saw him, being about eight hours, showed that it must have spread rapidly, and though, as I afterward ascertained, there was a marked destruction of the tissue beneath it, yet as soon as the baths were given, the constitutional symptoms, such as a maddening headache, high fever, aching in the limbs and foul breath, not only subsided inside of the first twenty-four hours, but the destructive process above mentioned was promptly checked.

The exudation, however, remained intact for about a week, its area slowly contracting each day. I was rather surprised at this, but soon found that it covered only those parts that had a raw, bloody surface beneath, and it disappeared as rapidly as healing by granulation would permit. Indeed, it was not until that process was complete that the last vestige of the exudation vanished. In this case, it was evident we had an absolute destruction of the tissue at the beginning of the attack, which was at once stayed as soon as the baths were given.

What more could be expected of the best possible treatment?

The following cases were reported by Dr. J. W. Gill :

CASE I. This patient, about six weeks previously, lost a child from diphtheria, under the care of another physician.

Every indication of that disease being present, except the membrane, I treated it as such, giving the baths every two hours, with the usual good effects, as all the threatening symptoms subsided rapidly. I do not include this as a genuine case of diphtheria, but mention it merely to show that the baths may even abort a case, as I am satisfied they did in this one.

After the fever had disappeared, quite a marked eruption appeared on her chest and arms.

CASE II. Two months later I was called to see the above mentioned lady's six year old son, whom I found down with diphtheria.

The membrane covered a good portion of the throat, and the usual symptoms attendant upon that disease were present. There were also two other cases in the immediate neighborhood.

Having already lost one child, the parents, as may be supposed, were greatly alarmed, especially as the child showed the same symptoms observed by them in the other case. I prescribed the usual remedies and cold sponge baths: in a week's time the child was perfectly well. A baby that could not be removed from the house did not contract the disease.

CASE III. Patient, a little girl. I had on previous occasions prescribed for this child for tonsilitis at the office, and did so at this time. The next morning I was called to see her, and found that the treatment for the above mentioned complaint had had no effect. In fact, I found she had grown worse. An examination of the throat showed that she was suffering from diphtheria.

The baths were ordered, and in a few days she made a good recovery, the disease making no further headway after they had been given.

CASE IV. Boy fifteen years of age. I had previously treated him for a severe case of quinsy, giving the cold sponge baths in connection with the general treatment. Inferring that he had the same complaint, I was called again, but found, instead, a well-developed case of diphtheria. The usual remedies were given, and the baths ordered every two hours.

After a few had been given there was a noticable improvement in his breath, which had been horrible. A culture was taken from his throat and sent to the Board of Health. The report to me



concerning it, was that diphtheritic bacilli were present in great abundance.

In a few days the throat was perfectly clean and the boy restored to good health. A second and third culture taken by the health officer showed the bacilli to be still present, three weeks later on, though the throat was otherwise in a perfectly normal state.

CASE VI. A baby fifteen months old. I was called and found the child in convulsions. On my next visit, observing that the child had fever, I examined its throat and found a diphtheritic membrane present. Notwithstanding this infant's tender age, the baths were given every two hours. Following them there was no further spread of the membrane, and the whole process of the disease being held well in check. The patient made a good recovery in ten days' time.

*Comments.*—Heretofore I have treated many cases of this disease in all degrees of severity with varying success, using the usual internal remedies, sprays, gargles, etc. Since I have employed the above treatment I have had no case terminating fatally, and I have found it in all respects more satisfactory than any other treatment in vogue.

From the foregoing I have adopted the following rules:

RULE I. As parents and nurses will sometimes leave the doctor to infer that the baths are given as directed, and yet not give them, it is best for him promptly to order cold water, towels, and blankets and supervise the giving of the first one, especially in the cases of children. In all cases make sure that your orders concerning them are implicitly obeyed.

RULE II. At the onset of the attack, when the patient is quite strong, reaction good, and the general condition not dangerous, the baths should be given day and night at least every two hours until marked improvement sets in.

No time should be lost during this stage of the disease to bring on profuse perspiration. So prompt action during the first forty-eight hours is generally all that is required to change into a light case what might otherwise develop into a dangerous one.

RULE III. When, however, at any stage of the disease the fever is high, delirium marked, breath foul, membrane dark and still spreading, and the general conditions threatening, the baths should be given as often as every fifteen minutes or half hour, especially if the reaction is good.

RULE IV. Even when there is an apparent change for the better, such as a fall in the fever, while the condition of the throat remains the same, the baths should be given as frequently as before.

RULE V. When the fever has subsided permanently and the condition of the throat has improved in a marked degree, then the baths may be given at longer intervals.

RULE VI. In cases where the vitality is low, reaction poor, extremities cold, and prostration is great, give hot drinks and stimulants, and put hot water bag to feet. Sometimes sweating will not occur until a number of baths have been given.

RULE VII. In all cases when it is time for another bath, no matter how profusely the patient may be sweating at the time, rub dry from head down, and then give it. During the first forty-eight hours, and at any stage of the disease when dangerous, do not hesitate to wake the patient and give them. Their soothing and quieting action will compensate for the disturbance, generally causing the patient to drop off to sleep again very quickly.

*Comments.*—The typical cases herein mentioned are all sufficient to show what cold sponge baths, as an aid in the treatment of diphtheria, will do. I have treated many other less severe cases as well as diphtheritic sore throat, tonsillitis, with the cold sponge bath, always with the same good results.

Where profuse perspiration follows the bath the disease is usually brought to a standstill at once. Following which the membrane changes rapidly in color from dark to yellow, and finally to a milky white, and at the same time losing its tenacious character and disintegrates. Its action upon the membrane is so noticeable that where any shred of

it remains after the baths have been stopped, it will adhere with great tenacity for some days.

In no case, even where the patient has perspired profusely day and night for seventy-two hours, have I seen, in the least particular, any special weakness, prostration, or ill effects, but, on the contrary, they are stronger and brighter. In order to oxidize the blood properly, and thus facilitate perspiration, these patients require absolutely pure air to breath. A warm close atmosphere, laden with carbolic acid or phenyl, retards the sweating process, and so should not be tolerated in the sickroom. I am satisfied that the disinfectant least harmful to the patient is the chlorides. Here is where some physicians make a serious mistake. In their endeavors to disinfect the premises they forget the patient. I have noticed that where cold baths are used in the treatment of diphtheria, that the fetor of the breath and the foulness of the air of the room soon disappears, and that other persons, even children who had been exposed to the disease, do not contract it. It seems that the baths go to the source of the contamination, *i. e.*, the diseased organism, and disinfects it. By the sweating process, the diphtheritic poison is evidently carried off as fast as it is generated in the system. The chemical ingredients of the perspiration itself in a great degree, no doubt, neutralizing its virulence.

I am satisfied that we shall hear far less of the contagious character of this disease, and the mortality resulting from it, after its treatment with cold sponge baths has been universally adopted.

This method, in connection with good homeopathic treatment, I consider far superior to the use of anti-toxin. Concerning the latter, since it fails to cure septic cases, we see no reason why it should be further employed.

During twenty years of active practice the writer has lost but three cases of diphtheria—two malignant, and one laryngeal. As it is, we are satisfied that had the cold baths been given, with good internal treatment from the beginning of the attack, these cases also would have made a good recovery.



## MATERIA MEDICA AND THERAPEUTICS OF THE EYE.

BY C. C. BOYLE, M. D.

(Continued.)

**M**EZEREUM.—Dryness in the eyes with pressure in them; they feel too large (Acon., Nat. m., Opium, Paris, Phos. ac., Plumb., Spig.).

A feeling as if eyes were drawn backward into the head (Crot. tig., Paris.)

Aching and tearing in and around the eyes; must rub them.

Lachrymation with smarting in the eyes (Ars. alb., Euph., Merc. cor.).

Ciliary neuralgia, the pains radiate and shoot downward, with cold feeling; soreness of the bone. Pain in supra-orbital nerve, generally one side < by warmth.

*Clinical.*—It has been found curative in rheumatic ophthalmia and ophthalmia consequent on abuse of mercury.

In blepharitis, with tinea capitis, which itches intensely.

Eczema of lids and head; thick hard scabs from which pus exudes on pressure.

In ciliary neuralgia following operation on eye I relieved a patient with this remedy of a supra-orbital neuralgia accompanied by pain in old decayed teeth; he had tried everything for it without relief. I prescribed it principally on the symptom of pain in the decayed teeth.

**NATRUM ARSENICOSUM.**—Eyes red in the morning on awaking; watery.

Pain in morning; also in evening on reading and writing.

Smarting : on reading ; in open air, with lachrymation ; as from wood smoke.

Heaviness ; in the morning ; in the evening eyeballs and inside of lids are full, causing feeling, on moving eyeball, as if something granular was between them.

Inner canthus red and sore.

Conjunctiva congested. Tenacious mucus in external canthus.

*Clinical.*—In chronic conjunctivitis : membrane injected ; enlarged follicles, or granules. Especially useful in conjunctivitis trachomatosa with pannus ; burning lachrymation ; photophobia ; eyes injected and inflamed.

I have found it useful in the milder forms, more follicular than true trachoma. I think there are more arsenicum symptoms present than those of sodium, in these cases for I have prescribed it.

NATRUM MURIATICUM.—Fiery zigzag appearance around all objects ; black spots and streaks of light (Cycl., Ignat., Lyc., Merc., Phos.) ; sudden darkness, everything turns black.

Vision double, sees only one half of an object. Unsteadiness of vision, objects become confused. Dim sight as if looking through gauze or feathers. Objects seem covered with a thin veil (Caust., Croc., Petrol., Phos., Sil., Sulph.)

Frequent obscuration of sight, especially when stooping, walking, reading, or writing. Redness of the eyes, lachrymation, with inflammation : feeling as if eyeball were too large (Acon., Opium, Paris, Plumb., Spig.).

Sensation as if sand were in the eyes (Calc c., Caust., Hep. s., Sulph.) : smarting sensitiveness.

Drawing, stiff sensation in the muscles of the eyes when moving them ; letters and sewing run together ; aching in eyes when looking intently.

Ciliary neuralgia ; pain in and above the eye, coming and going with the sun ; eye congested, sore and painful when moved, sharp pain over the right eye on looking down (looking up, Chelid.), with throbbing headache < in evening. Pressive pain in forehead and eyeball, lids can only be raised with exertion and pain. Neuralgic pain in eyes, periodical, with flow of tears and reddened conjunctiva.

Throbbing as from little hammers; awakens with headache every morning, < from reading and talking, sensitiveness of the eyes, after using them they smart, itch, and burn. (Sulph).

Burning in the eyes, with increased secretion of mucus; lids agglutinated in the morning; great sensitiveness to lamplight.

Violent burning in the eyes in the evening.

*Clinical.*—It is one of the best remedies in muscular asthenopia, especially if, affecting the internal recti, you have the burning and smarting in the eyes after using them especially in the evening by artificial light; the lids feel heavy after using eyes. It has been found curative in ulcers of the cornea, also blepharitis in cases where there is a feeling of sand in the eyes, smarting and burning; acrid excoriating lachrymation; marked photophobia with spasmodic closure of the lids.

It has proven a valuable remedy in follicular conjunctivitis; also in some cases of granular lids, especially those that have been treated with caustics.

NUX MOSCHATA.—Objects look larger (Hyos.), (too small = Plat met.), too close together; very distant; oblique; red; seem to float before the vision. Motes before the eyes (China, Lith. carb., Magn. c., Stann., Ver. alb.).

Momentary blindness; grasps head, it feels strangely. Pupils dilated, and immovable, or contracted, with sensation of fullness in the eyes.

Dryness of the eyes, too dry to close the lids; can move the eyelids only with difficulty. Lids heavy, stiff. Tension around eyes and in lids. Drooping of eyelids (Caust., Gels., Opium, Sep., Zinc. met.) Dryness in the eyes in the evening; reading by artificial light was difficult, eyes would close from sleepiness.

*Clinical.*—I have found it useful in affections of the eye where the patient complained of a drowsy, sleepy feeling.

I have cured episcleritis involving both eyes; eyes were red and painful; a nodule, due to an inflammation of the sclera, over the external recti; patient complained of feeling drowsy.

NUX VOMICA.—Inflammation of the eyes. Injection of



the whites. Swelling with red streaks in whites and tensive pain. Itching in the eyes > rubbing. Biting in the eyes < external canthus, with lachymation. Movement of eyes difficult on account of stiffness of the muscles (Kalmia.) Lachrymation in the morning when yawning.

Blinking of the eyelids. Pressure in the upper eyelid < morning.

Pain in the margin of the lids as if rubbed; some < in the morning and on touch.

Smarting dryness in the inner canthus in the morning in bed: pain as if sore and rubbed, also in inner canthus.

Photophobia in the morning, with obscured vision. Vision sensitive; cloudy.

*Clinical.*—In partial atrophy of the optic nerve I have often improved vision more or less, depending upon the case, but the atrophic condition remained the same; it is especially useful in case due to excessive use of liquors and tobacco.

I have found it useful in relieving and curing various diseases of the eye when given according to the indications, especially on the morning aggravation.

OSMIUM.—Weakness of sight; could not tell night from day.

Vision dim < right eye. Letters run together when reading. Flame of a lamp seems confused and larger than natural. Candle-light surrounded by a yellow circle; by a rainbow-hued circle; by a green circle with red margin, larger or smaller according to distance; by a bluish-green circle with ashy gray margin, becoming larger as the light was removed; by bluish-green circle the outer margin of which is bright red, if light is ten or fifteen paces from eyes; the flame seems enveloped by dust or smoke. Veins of fundus large and tortuous. Pain in eyes sharp, lids spasmodically closed, light distressing, pain in globe, conjunctiva and sclera injected, lachrymation, dim vision.

Violent supra- and infra-orbital neuralgia.

*Clinical.*—It has been reported as being curative of glaucoma. I have used it myself with relief in several cases, but at the same time have instilled solution of Sulphate of Eserine into the eye.

PARIS QUADRIFOLIA.—Eyeballs seem too large (Acon., Calad., Hyos., Nat. m., Opium, Spig.), seem to have no room in socket; as if lids could not close. Eye feels as if projecting, with a sensation as if a thread were tightly drawn through eyeball and backward into the middle of the brain (Crot. t.), eyes feel heavy as lead.

*Clinical.*—It has cured paralyses of the iris and ciliary muscle due to an injury, accompanied by the pain drawing from eye to back of the head. I have relieved asthenopic symptoms of the eye accompanied by the feeling as if the eye were pulled backward.

PHOSPHORUS.—Appearance before the eyes as of sparks in the dark (Bar. c., Calc. c., Lyc.;) luminous, especially red; various flashing lights and colors; muscæ volitantes; halo around the light (Alumina, Anac., Bell., Cycl., Digit., Osm., Sep., Sulph.)

Green halo around candle (red halo=Bell.) misty, with attacks of vanishing light, blackness or black points or sparks; flickering, with roaring in the head.

Eye very sensitive to light, or dazzled by bright lights.

On reading, letters look red, outline undefined; objects tremble.

Objects look green or gray.

All objects appear to be covered with a gray veil.

Eyes give out while reading; after reading, dull pain deep in the eyes.

Sees more distinctly in the morning, in the twilight, than during the day.

Sensation as if the eyeballs were swollen and pushed out of head.

*Clinical.*—It has been found useful in loss of vision dependent upon sexual excess, also from other loss of fluids. In various affections of the optic nerve, retina, and choroid, especially where there are present photopsies, chromotopsies, halo around light, red appearances of objects, flashes of light before the eyes. In retinal apoplexy and retinitis albuminurica it is often of service in retarding and checking the progress of the disease.

It is also prescribed to arrest the growth of cataracts.

## CHRONIC DEAFNESS RELIEVED BY NASAL OPERATION.

BY DR. H. F. FISHER, NASHVILLE, TENN.

CASE : Mrs. M. M., æt. thirty-two, no children ; good health ; nervous temperament ; dark complexion ; black hair and eyes ; presented May 8, 1893, complaining of partial deafness, which barred pleasant social relations.

Her mother has been totally deaf thirty years ; one brother and one sister are so deaf that they can hear only very loud conversation directed to them. Mrs. M. believes she inherits her deafness ; has been growing deaf for thirteen years ; hears only loud conversation directed to her, and must see the lips, "then more than half is guess work" ; never had earache ; two years ago had furuncles ; hears better in a noise ; takes cold easily, at which times she suffers from sore throat ; has annoying tinnitus in right ear, like a railroad train crossing a bridge, and in the left ear like crickets, alternating with a rumbling, roaring sound. Hearing : R. and L. no watch sound ; T. fork, middle C., heard through bone, R. twelve seconds, L. nine seconds, after it is lost through the air ; the right ear is worse for the voice. After Politzerization with chloroform vapor there is improvement of hearing for voice and T. fork. The external auditory canals are medium size, straight, and have no cerumen ; M. T. sclerosed, sunken, light spot displaced forward, and the manubrium pushed outward (more so in R.) ; Eustachian tubes closed ; chloroform vapor necessary in inflation ; orifices and surrounding tissues hypertrophied ; no adenoid vegetations or granulations ; pharynx, naso-pharynx, and nares in a chronic catarrhal condition, the tissues being thickened and hypertrophied ; the R. middle turbinate reaching to the floor and the L. middle turbinate nearly reaching the floor of the nares ;



inferior turbinates hypertrophied and crowding the middle turbinates against the septum ; speech thick, with nasal twang ; breathes through mouth and nose.

Treatment begun June 8 ; internally, graphites 6x before meals and when retiring ; locally, saline antiseptic sprays for cleansing nares and naso-pharynx, then apply with brush Lugoll's solution, followed by Politzerization. July 1, added to this treatment with the vibrometer, using center attachment three to five minutes, then first string with clamp at A2 for same time for left ear, and fourth string wide open, with felt over it at A2, to make sound like fire engine pumping, for right ear, same length of time. July 11, hears conversation much better ; no improvement of tinnitus or of hearing for other sounds. Discontinued treatment until November 22. On August 26, caught a very severe cold ; hearing made worse, but no sore throat. Local treatments as before, except vibrometer, for a week with indicated remedies relieved the cold and improved the hearing. November 22, has another severe cold and hearing very much worse than in July. Began daily treatments as before with vibrometer ; center attachment used fifteen minutes, and strings fifteen minutes. Made four applications of acid. chromic. to the inferior turbinates prior to December 20. After December 6 took one treatment each week until January 8, 1894, when she discontinued because discouraged. I advised removal of each middle turbinate, and on January 24 she consented, if I could not get improvement after two weeks' more trial of previous treatment. Increased use of vibrometer to thirty minutes for center attachment, and thirty minutes for strings ; also used galvanic current one to five cells,—all she could bear,—the positive pole against M. T., negative pole in nares, or naso-pharynx, for fifteen minutes daily. She always heard better immediately after treatment, but half an hour after heard no better than before. February 15, removed all the middle turbinate in right nares with scissors ; there was considerable shock, some hemorrhage, and a great deal of oozing for several days owing to weak styptic used. February 16, "heard the watch tick in right ear for the first time in over ten years" ; 21, W.  $\frac{3\frac{1}{2}}{100}$  ; 25,  $\frac{5\frac{1}{2}}{100}$ . Remedies used as indicated. Graphites 6x, kali bichr. 3x, hydrastis can. 3x, kali mur. 3x, sanguinaria can. 3x, and fagopyrum 1x, 2x, and 3x. February 28, H. D. R.  $\frac{5\frac{1}{2}}{100}$ . For conversation much improved, but tinnitus no better. Went

home to recuperate. Returned March 15, desiring left middle turbinate removed. Hearing, R.  $\frac{40}{100}$ , L.  $\frac{c}{100}$ . Explained that she should not expect such a brilliant result in left ear, but she insisted upon the operation, and on March 25, having delayed on account of the very cold weather, removed the left middle turbinate. The shock was very slight; little hemorrhage, and no subsequent oozing, having used a weak Monsell's solution. March 28, H. D., R.  $\frac{36}{100}$ , due to the irritation after operation (?), L.  $\frac{3\frac{1}{2}}{100}$ . March 30, allowed her to return home at her own request. Reports by mail June 1 that hearing has remained about stationary since last operation, but she has again entered the social world and is deriving much pleasure therefrom.

I consider the good results due to the operations, the vibrometer having been given a faithful trial without improvement. Other cases that have not improved after a fair trial,—twenty-five to thirty successive treatments,—with the vibrometer have improved after an operation upon the turbinate bodies or upon the septum. It is true she improved some prior to July 11 without an operation, but this improvement was lost before November 22, and could not be regained, or at least was not, until after the operation. I now refuse to treat patients with the vibrometer unless they agree to take at least fifteen successive treatments before giving it up, but so far I have had only one good result without operation in the serious cases, *i. e.*, of long standing.

June 11, 1896. A report of this date from this case, states she is able to perform her social duties with pleasure. Hearing is steadily improving. Other cases operated since have reported equally as good, though not as surprising results.

## A CONTRIBUTION TO THE STUDY OF OCULAR AFFECTIONS AND OF SINUSITIS OF DENTAL ORIGIN.\*

BY DR. ALPH. PECHIN.

THE correlation which exists between dental lesions and ocular affections has long been observed and noted by minds gifted with sound clinical judgment ; but what could not be easily explained was the intimate bond which connects these processes one with the other, and the nature of the means by which they are propagated. In order that researches in this direction may be fruitful, it is necessary to accept new anatomical ideas, and above all to profit by our knowledge of bacteriology—a knowledge which makes clear certain questions of pathology which up to the present time have been obscure.

Ocular affections of dental origin have been divided, according to their nature, into two classes: affections of a reflex, and those of an inflammatory nature. But this division, assuredly capable of maintaining a certain order in the subject, seems to me to be schematic and altogether too peremptory ; for certain reflex lesions often become inflammatory in character or, in other words, are, after all, only a phase of the inflammatory phenomena. For a similar reason the line of demarcation between these two classes seems to me to be far from clear, and we should therefore make a careful study of each case, while the rationale of accidents should be thoroughly demonstrated and carefully followed out. I think, furthermore, that lesions of the reflex class will be diminished in favor of

\*Read before the *Société d'Ophthalmologie* of Paris.



lesions of microbic origin, in proportion as the progress in bacteriology permits us to understand better the nature of the divers processes and their mode of evolution. It is not to be understood that I would deny the reflex nature of certain ocular affections in order to bring everything within the domain of microbic infection; this is certainly neither my aim nor my belief, but am I not authorized in making some reservations when I consider how many affections, formerly called reflex, have succeeded in finding their legitimate and duly appointed places in the nosological list, when a more profound knowledge has better permitted the investigation of their intimate nature? For, it may be foreseen that without entirely disappearing, the ocular affections of reflex origin, having reached their limit, will become more and more restricted.

Certain authors have thought that innervation of the fifth pair would produce the lesions of the anterior segment of the eye, reserving for the posterior segment of that organ lesions of inflammatory or infectious origin, the propagation of which would be directly to the orbit itself. Here again is a very clear and distinct division, but the actual state of our knowledge does not allow us to accept it, at least, without reserve; neither does physiological experiment nor clinical experience authorize it.

I accept the reflex origin of lachrymation due to irritation of the terminal filaments of the trigeminus, and in amblyopia with peripheral contraction of the visual field; but even in the latter case I am not able to rid myself of a certain amount of doubt, and would not altogether deny the influence of the propagation of an inflammation toward the optic foramen, when, owing to the variable thickness of the optico-sphenoidal partition, the optic nerve runs the risk of more or less compression, and, if not compressed, at least infected by septic elements—compression or infection being very easily able to account for the diminution of the vision and of the visual field.

However small it may be, a place ought always to be reserved for purely reflex phenomena. A dental lesion

producing a sensitive impression would be transmitted by means of the trigeminus to the bulb, to the great sympathetic, or to the cilio-spinal center, giving the impulse to a greater or lesser number of neurones according to the impressionability of the subject, or for other causes unknown to us, all of which are reasons for the production of the sensitive impression in several foci, giving rise to various motor and vaso-motor disturbances; for, in these motor or vaso-motor troubles, essentially transitory and purely dynamic, the characteristics which pertain to inflammatory lesions of the uveal tract and the retina are never found.

With regard to congestive phenomena of reflex origin, would it be possible, by irritation of the trigeminus, to notably dilate the vessels of the ocular globe, the ciliary circle, and even to produce an iritis, a *false iritis*, as it is called by those who in such cases reject the microbic pathogenesis in order to admit solely the influence of reflex? This is a matter for discussion. On the 11th of February, 1894, M. Fromaget reported to the Society of Medical Sciences of Bordeaux a very interesting case relating to this subject. The patient, seen by M. Badal, had an empyema of the antrum of Highmore, consecutive to a dental caries, and accompanied by iritic phenomena, which disappeared when the sinus was subjected to puncture and antiseptic lavage. Relying upon the *immediate* success of the treatment, MM. Badal and Fromaget saw only a simple congestive condition—a *false iritis*. According to these authors the mucous membrane may go so far as to double its thickness during an empyema, and in this way obstruct the circulation in the orbit and in the interior of the globe; they recall the fact that the terminal extremities of the trigeminus nerve, dipping down into the diseased tissue, are constantly in a state of irritation, and that Aippel has demonstrated that irritation of the trigeminus dilates, by reflex action, the vessels of the ocular globe, and especially those of the ciliary circle. Moreover, these authors note that the ocular trouble is always on the same side as the lesion of the sinus, which, for them, constitutes a

further proof in favor of the theory that reflex influences provoke the vaso-motor dilatation. Undoubtedly these are serious arguments in favor of the reflex theory. Nevertheless, in this respect I coincide entirely with the opinion of C. Ziem; with him, I believe that since following a dental caries, an infectious osteo-periostitis, there was developed an empyema of the antrum of Highmore, and afterward iritic symptoms, there must have been a metastasis through either the venous or lymphatic channels into the uvea and the iris.

It would seem that this latter opinion should be generally accepted. Specially opposed to it is our ignorance of the path the pus would have to traverse in order to reach the eye; and supposing that this path were well known and clearly demonstrated, the adversaries of the microbic theory would refuse to admit it, and they would do so with some appearance of reason, for it must be remembered that the microbes that cause empyema, having once reached the choroid, would develop only a simple congestive condition.\*

Let us return to the two objections most strongly urged. To the first I would respond that if the channel through which the pus passes is not actually known, is not clearly demonstrated, such a demonstration may occur, and consequently I cannot attach any great importance to this anatomical argument, which is purely *negative* in character.

It is more difficult to answer the second objection: to be positive that the infectious elements transported to the eye, by some means or other, would inevitably cause mischief and reveal their presence other than by simple irritative congestive troubles. I ask myself if it is absolutely certain that the microbes which are carried from the maxillary

\* In passing, I would call attention to the views of M. Panas, that in these cases of metastatic infection, the word choroiditis is inexact and should be replaced by the more precise term, retinitis. And, in fact, in all cases of consecutive infection of the eye, the choroid has always been found healthy in the beginning. It is the retina which is primarily affected, not the choroid, and there is a retinitis and not a choroiditis, the latter being secondary. May not the vascular system of the retina be one of the paths for the transmission of the infection?



sinus into the choroid (or retina), ought *necessarily* and *inevitably* to produce lesions upon the absence of which MM. Badal and Fromaget found the greater part of their argument. I am convinced that these lesions are very frequent, but are they a *constant and necessary function of these microbes*? Is the biology of these micro-organisms sufficiently well known and established to enable us to make it a basis from which to draw formal conclusions? I do not think so. And, furthermore, we ought not to forget that we are looking upon the very beginning of bacteriology; that this science is still in its period of development, not to say grouping; that physicians and surgeons have not greeted its dawn with any great amount of enthusiasm; that they have lived until now, very happy in the possession of simple, though often deceptive, hypotheses; and that on the contrary we ophthalmologists ought to recollect that we should be happy to take part in the rise of an exact science which is growing rapidly; we should be very prudent and not demand more of bacteriology than it is really able to give. Although sufficiently acquainted with the pneumococcus, the staphylococcus albus and aureus, and particularly the streptococcus, to know that once installed in the retina, and afterward in the choroid, they should, and often do, give rise to an infectious retinitis, and consecutively to a purulent choroiditis, it is for this reason that we should not be absolutely positive in declaring that this is the only manifestation of which they are capable, and by which they or their toxins are able to reveal themselves in the eye.

Nor is this all there is to be said concerning *false iritis*. The debate is still open, but I am more inclined to see in similar lesions a purely *microbic* origin than to consider the case of M. Badal, cited above, as demonstrating the opposite view.

But here a question suggests itself, and in presenting it I desire to give proof of a spirit of conciliation which will perhaps enable me to extend a hand to the partisans of both theories. We meet here on common ground, where the

meaning may be made clear. May not irritative congestive phenomena in the eye be the point of departure, the occasional cause of a microbic infection? Certainly. And moreover there is reason to admit a most perfect analogy between irritative congestive phenomena of a dynamic character, such as ought to produce reflex action, and traumatism. It is clearly and positively proven that in an individual in any state of septicæmia, even if the infection be latent, such infection will show itself upon the occasion of a traumatism, and appear in the same region in which the traumatism was located. The traumatism would localize the septic microbic process. Clinical facts and experiences in the laboratory are abundant; they coincide in leaving no doubt whatever concerning the precise relations existing between traumatism and the local manifestations of a septic state or diathesis, relations to which Professor Verneuil has already drawn attention in his work on latent microbism. The traumatism may then reveal a latent infection and localize it. It may also enfeeble the tissues, reduce their phagocytic power, and by this depreciation of the vitality, by this hypotrophy, deliver them over to the poisonous action of germs which have lived in contact with them as saprophytes, in silent hosts, which all at once become virulent and pathogenic because they have found a soil favorable to their activity. And so it is that modern theories would claim for themselves what the ancients have said concerning humors: *Ubi stimulus, ibi fluxus*.

To the numerous observations already known, where, in an injured eye, there is such preservation of the teguments and of the conjunctiva that it is not possible to admit of an exogenetic infection in order to explain the infectious accident, recognized after a bacteriological examination to be a metastasis of endogenous infection, there is reason to add three others reported by C. Ziem in the *Annales d'oculistique*, September, 1894, in which the influence of an infection from the nose and maxillary sinus upon the injured eyes is clearly seen. In these three cases an anti-

septic treatment of the primary focus of infection was the means of arresting the progress of an irido-cyclitis, which was producing a condition demanding enucleation. In one case the uninjured eye was benefited by an increase of visual acuteness; in both of the others the sympathetic symptoms ceased immediately.

Then, without doubt, as already demonstrated by Schimdt-Rimpler, the injury could create an irritation, a sort of congestion, of the ciliary circle, which need not even localize itself in the injured eye, but might attack the other eye. Thus we have the first phase of those conditions which, passing through a certain evolution, cease to be a simple irritation, and, if there is in the nose, mouth, or other locality any element of infection, become inflammatory and infectious.

In these cases the traumatism is the primordial cause, but *not sufficient* to produce the inflammatory conditions; these owe their evolution to an infectious process. For, in the case which has engaged our notice, the irritative congestive state was provoked perhaps by a cause foreign to the traumatism, to a cause of a reflex character; if now the patient is attacked with some infectious lesion of the nose or sinus, the same symptoms more strongly accentuated will manifest themselves. Furthermore, in place of seeing two processes, the first irritative, the second infectious, succeeding each other accidentally, the one calling up the other, the latter often not inevitably and necessarily responding to the call, it seems to me that bacteriology is not opposed to a conception of an infectious process that commences with irritative symptoms, which are none the less infectious phenomena. Thus the irritation accounted as reflex is purely and simply an infection. And so I would respond to the question proposed.

An infection of dental origin may extend to the sinuses of the face; the superior maxillary, the frontal, the ethmoidal, and the sphenoidal sinuses. Formerly it was thought that occlusion of the orifice connecting the sinus with the surrounding tissues, or with the external air, would



produce an inflammation of the sinus; to-day this is well known to be an error; certainly an occlusion could not act in this way, it is rather the opening, the permeability of the orifice that creates all the danger of infection. This ætiological idea is very important, since a therapeutic preventative would consist in antisepsis—a very natural proceeding. Infectious sinusitis of the superior maxillary following an alveolo-dental periostitis, ought to be repeated in the orbit; it is sufficient to refer to the anatomy of that region to understand how the infectious processes are enabled to extend in this direction. Demarquay and Duplay have reported numerous cases of orbital phlegmon. In an immense majority of these cases the phlegmon arose from a periostitis of the floor of the orbit following an inflammation of the antrum of Highmore. The pus ought to reach the orbit by separating the periosteum from below upward, but these cases are rare on account of the resistance of the aponeurosis. In certain cases the venous channels have been the sole path of infection. Gurwitsch and Festal have shown that the veins of the maxillary sinus and of the periosteum of the jaw come principally from the ophthalmo-facial, which, arising from the pituitary, passes through the speno-palatine fissure, anastomoses with the intra-orbital veins and empties into the facial beneath the malar bone. An inflammation of this vein would instantly provoke a thrombo-phlebitis of the cavernous sinus. The inflammatory process may follow the lymphatic channels, as is admitted, but in reality we do not know what lymphatic would carry it to the alveolar border of the orbit; although we do know the inverse lymphatic path which leads from the orbit to the inferior and lateral regions.

Alveolo-dental periostitis of the inferior maxillary, and in general all infectious states of the alveolar border, ought to cause thrombo-phlebitis of the cavernous sinus, and a secondary orbital phlebitis. The case studied by Boiteux and A. Terson showed that the infection reached the base of the skull through the veins of the foramen ovale.

What has been said of the superior maxillary sinus ought

to apply to the other sinuses of the face. The infection may attack them separately or *successively*, as is evidenced in a very remarkable case communicated by M. Panas to the Académie de Médecine (March 12, 1895). \*

The following is the clinical history of the case as it was taken down by M. Courty, who was on service as interne :

Name, P. A. ; porter, thirty-one years, entered April 16, 1894, in the Hôtel-Dieu, ward Saint Julien, bed No. 16. Personal antecedents : presenting nothing particular. Onset of the disease : In the early part of April the patient began to suffer from an upper molar, that was somewhat carious, and has noticed that since that time he has had to blow his nose a great deal. The discharge is muco-purulent, especially when bending well forward. About the same time he was conscious of a bad odor from the nose. There was no pain other than from the tooth. No swelling of the alveolar border. The tooth was treated five or six times in a space of fifteen days the painful symptoms persisting just the same. *On the afternoon of Friday, April 13, P. lost his sight completely.* He noticed it while at work, and remarked that when closing the left eye he could see absolutely nothing. This amaurosis came on in a few hours, for the patient asserts positively that he could see very well with his right eye not only on the day before, but on the morning of the 13th, when he awakened. At the same time there appeared violent pains over the entire right side of the face ; the cheek and orbital region being particularly painful. The conjunctiva became rapidly infiltrated, and within a few hours the lids became swollen. The tissues of the cheek were also œdematous. The patient was feverish and had some chills. This state continued until his entrance to the hospital.

*Condition at entrance.*—The patient presented himself at the ophthalmological clinic on Monday, April 16. The upper lid and the right lower lid, as well as the cheek on the same side, are swollen and œdematous ; there is no secretion upon the lids. The skin is red, violaceous, tender, shining, and hot. All of this inflamed mass is very painful to pressure.

The extremely œdematous lids are separated with difficulty, and the eye directed forward hides in part an exorbitismus. The

\**Arch. d'ophl.*, March, 1895.

eye is immobile, the pupil looking directly forward. The cornea and pupil are normal.

The ophthalmoscope shows that the optic disk is slightly discolored, the veins distended, not pulsating, and the arteries diminished in volume. The patient cannot distinguish persons about him, and it is difficult for him to be sure that he perceives a lighted lamp passed before his eye. In palpating the superior as well as the inferior palpebral fold, fluctuation is found. It is difficult to give an account of the superior maxillary, as the skin covering it is very sensitive. The patient complains of lancinating pains in the right side of the head; he also presents some herpetic vesicles on the lips, implying a febrile movement. The tongue is coated and the breath fetid. The general condition is good, but the man has a very depressed air. P. was entered in the Saint Julien ward. Upon his arrival an antiseptic dressing was applied, and he was given fractional doses of calomel.

April 17.—Incision of the lid at the middle of the orbital arch. A few drops of pus exuded.

April 18.—Under chloroform narcosis pus flowed from the right nostril. The first molar on the right side was removed, and found to be slightly carious. With a trephine, a perforation was made through the alveolar process into the maxillary sinus. Through this orifice there was a discharge of extremely fetid pus. The cavity was washed out with a solution of biniodide of mercury, and a quantity of purulent liquid and grumous, caseiform matter, excessively disagreeable in odor, came away. A rubber drainage tube was introduced through the alveolar orifice into the sinus, and fastened below with an ivory pin, the whole being held in place by a thread attached to the adjoining molar. During the operation the cavity was repeatedly flushed with a solution of permanganate of potash, 4 parts in 1000.

April 19.—The inflammatory phenomena and swelling persisting about the circumference of the orbit, M. Panas made a T-shaped incision in the lower lid at the center of the orbital border. Pus escaped from the bottom of the opening, and upon introducing a probe into the incision the floor of the superior maxillary was found to be extensively denuded. It was washed with permanganate solutions and drainage established. The liquid came out through the nose without passing through the maxillary sinus, and when the patient blew his nose the air passed



not only through the opening made in the lower lid, but also through the one in the middle of the upper lid. Lavage with permanganate of potash was ordered several times a day, the wound to be covered with an antiseptic dressing in the interval.

April 20.—The morning temperature has fallen to  $36^{\circ}$  C. The same local conditions, the same dressing as before. The patient feels a little better. No perception of light in the right eye. Pupil enormously dilated. Persistence of immobility of the globe.

April 22.—The pains in the head and the fever have disappeared. The general condition is improved, and the patient begins to take nourishment. The swelling of the lids has diminished, and it is possible to slip a drainage tube upon the floor of the orbit. The amount of pus appearing when the cavity is washed out is small in quantity. There is some movement of the ocular globe. For several days the patient has been questioned concerning his visual acuteness, and to-day when a compress was passed before his face he says he has a sensation of an object moving before his eye.

April 23.—The same conditions, but the patient complains of having no perception of light.

May 1.—Progressive amelioration of the general and local condition. The patient distinguishes the fingers of the hand indistinctly.

May 7.—Suppuration has partly disappeared.

During the night of May 6–7 the patient had a very intense cephalalgia, the pain extending to the nape of the neck and somewhat in the neck itself; some vomiting. In the morning general malaise and chills; the morning temperature has gone up to  $39.8^{\circ}$  C. The dressing is slightly stained with pus. The liquid injected brings away nothing. The patient is hardly able to distinguish the hand. During the days following the general condition grew worse, and the patient complained of cephalic pain; he frequently experienced a sensation of uneasiness both at night and during the day. Occasional vomiting without effort. His neck grew rigid, the head could be moved only with great difficulty, and he avoids all quick movements because they bring on a pain in the head. Bright light and noise were annoying; he preferred to be in bed and lay doubled up. There was no mental irregularity nor any change in the lesions of the right side of the face. The fever

increased. During the night of May 14-15 the patient was suddenly siezed with intense prostration. The interne on duty was called, but the patient died about ten minutes after the beginning of the attack. During the day no alarming change had been noticed.

*Autopsy, May, 16th.*—Upon removing the skull cap, as the anterior portion was raised up, a speck of greenish pus could be seen hidden in the right frontal sinus. The sinus was full of similar pus, but the osseous walls were intact. The left sinus was normal. In raising the right frontal lobe it was found to be *adherent* to the arch of the orbit, at which point it presented a brownish tinge. Pressing slightly underneath, the tissue became separated and a certain quantity of sanious pus issued forth; this pus being gathered from the lamellæ with a pipette for bacteriological examination. Upon completely removing the brain and breaking up the adhesions, it was found that the vault of the orbit was perforated on the right side. The orifice was about the size of a lentil. Upon cautious dissection of the orbital vault and the adjoining bony structures, it was seen that the ethmoid and the lesser wing of the sphenoid were infiltrated with a darkish pus; while the right sphenoidal sinus contained no pus. The entire periosteum of the orbital cavity was loosened, and between it and the bone was a large space in which pus had collected. The muscular cone and the cellulo-adipose tissue of the orbit were absolutely normal, being enveloped in the sub-periosteal collection, which had pushed forward, producing an exophthalmos. The opening of the cavernous sinus and the veins that empty into it showed an entire absence of thrombo-phlebitis. On raising the eye by cutting the optic nerve close to the optic foramen, it was seen that the maxillary sinus communicated extensively with the cavity of the orbit. Examination of the vault of the orbit showed that the perforation, not quite circular in form, lay toward the inner third of the speno-frontal suture, in the vicinity of the optic canal. The bone at this point revealed the brownish tint characteristic of caries. On examining the brain, it

was seen that the meningeal vessels as far as the annular protuberance were bordered with a whitish trail of pus. The lateral ventricles were distended with an abundant sero-purulent liquid. A cut made in the under part of the frontal lobe at a point corresponding to the perforation into the orbit, demonstrated the existence of an intra-cranial abscess the size of a large walnut. This pouch, lined by a false membrane, did not seem to communicate with the lateral ventricles. It occupied the central portion of the right central cornua. All of the surrounding cerebral tissue was changed in color and consistence. The base of the brain, including the chiasm, the pons varolii, and the crus cerebri, was carefully removed in order to submit a specimen for detailed histological examination. The other viscera presented nothing of special interest.

*Bacteriological examination.*—At the time of the operation the pus contained in the orbit and maxillary sinus, examined by A. Terson, was found to be rich in staphylococcus aureus, in a pure state. Inoculation of cultures of these microbes in the cornea of an adult rabbit provoked a panophthalmitis, proof of its great virulence. Cuénod, proceeding in the same way with the pus from the cerebral abscess, found a large number of streptococci, with few staphylococcus aureus; showing that the meningo-encephalitis which carried the patient off in a few hours arose from a secondary infection that the antiseptics used had been powerless to prevent. The histological examination of the optico-sensory apparatus is of great interest, and gives us the opportunity of following step by step the evolution of the neuritis, characterized in life by the abrupt appearance of a unilateral amaurosis with beginning atrophy of the optic disk on the side corresponding to the sinusitis, and a perforating abscess of the orbit, carrying in its train a meningo-encephalitis and sudden death.

In order to do this, let us follow A. Terson in the examination successively of the globe, the intra-orbital portion of the nerve, the adjoining portion of the optic canal, after decalcification, the intra-cranial portion of the



nerve, and finally the chiasm and optic tract as far as the corpora quadrigemina. In the general hardening process, Müller's solution was used, and the bone was decalcified in a mixture of hydrochloric and nitric acids, 5 grams of each with 200 grams of distilled water and 800 grams of ninety per cent alcohol.

The specimens were embedded in celloidin, and the sections stained with carmine, hematoxylin, and the carmine of Mayer; also Weigert's method, to make sure of the condition of the myelin at different points of the optic tract.

*The globe of the eye.*—The anterior segment was found to be absolutely healthy. The optic disk was free from inflammation, and possessed its physiological excavation; the central vessels were normal. At this point Weigert's reagent showed that the myelin was less stained and seemed to be disintegrated. This was especially true of the nasal side of the terminal portion of the nerve.

*Intra-orbital portion of the nerve.*—This portion was submitted to a large number of successive perpendicular sections, all of which were treated with the same reagents, and found to be normal. The only detail to be noted consisted in the presence of a thin layer of inflammation cells about the pial sheath of the nerve, indicating a slight degree of perineuritis.

*Intra-canalicular portion of the nerve.*—As for the frontal sections containing the nerve, its sheath, and the bony walls of the optic foramen, we may be assured the seat of the lesion is not there. The most striking point is the accumulation of a large number of round inflammation cells in the inter-vaginal space, forming a muff around the pia mater, which is supplied with a large number of capillaries engorged with blood. Weigert's reaction shows the myelin to be granular, and in its greater part refractory to staining, but without hyperplasia of the connective stroma, nor of the neuroglia. It might be called a Wallerian degeneration by compression without interstitial neuritis.

*Intra-cranial portion of the nerve, the chiasm, and optic*

*tracts*.—The right optic nerve seemed to be more flattened than the left, and reduced in size; but the nerve tissue stained almost as well as that of its companion. A section through the anterior portion of the chiasm shows its left side, corresponding to the cross fibers coming from the right optic nerve, to be flattened and much thinned. The same condition is found in sections through the middle and posterior portions of the chiasm. A reduction in the size, though much less marked, was encountered in the left optic tract. All of the sections receive the stain well in Weigert's reaction. From the posterior half of the optic tract to the corpora geniculata and the corpora quadrigemina, there appears to be no difference in size between the right and the left half of the optic system.

In short, from the fact of the compression of the nerve in the inflamed optic canal, there has resulted—the interception of the centripetal sensitive current toward the center, whence the sudden amaurosis; the effusion of a certain amount of plastic liquid into the sheath, and correlatively the discoloration of the optic disk by resorption of the myelin, with slight hyperæmia of the retina, as evidenced by the ophthalmoscopic examination; and, finally, a Wallerian degeneration having a tendency to ascend toward the opposite half of the chiasm and the left optic tract.

The following case, presented by M. Fage before the Société d'ophtalmologie of Paris, November 7, 1893, presents a marked analogy to the former, with the fortunate exception that the evolution of the lesion was arrested.

A man of twenty-nine years presented himself to M. Fage for consultation in regard to an exophthalmos of the left eye, accompanied by chemotic swelling and very œdematous lids. The pupil slightly dilated; the fundus normal; the orbit around the globe open to exploration. On the other hand, the cheek is enlarged and painful to pressure. Examination of the mouth discloses the presence of a number of carious teeth and stumps, and on the left an inflammatory swelling of the upper gum where the first premolar had been. This tooth having been removed a few

days before. These symptoms becoming singularly aggravated in spite of the proper treatment, M. Fage made a small opening in the capsule of Ténon (the operator, believing that he had a case of tenonitis, treated it by Drausart's capsulotomy). There was no escape of any characteristic liquid. From the incision in the lower lid, however, there came a flow of fetid, sanguineous pus. From the opening into the maxillary sinus through the alveolar process at the site of the missing tooth there also appeared a little pus. Under antiseptic lavage the cure was very rapid and complete.

The succession of the phenomena is very easy to follow in this case: alveolo-dental periostitis, with abscess of the maxillary sinus, and periostitis of the walls of the sinus, starting up an acute inflammation of the cellular tissue of the orbit and suppuration of the tissues in the palpebro-jugal region.

To these cases, I would add the following, which I know is not free from objection, for, while it testifies to a positive relation between a dental affection and a serous iritis, it does not demonstrate positively that infection was the real cause, as I myself believe; but, if it is not convincing, it is because in such cases, irrefutable proof is impossible unless we could, on the one hand, make an examination of the pus coming from the dental cavity, which is easy to do, and, on the other hand, make an examination, in the same way, of the ocular liquids.

Miss M., thirty years, came to me for consultation, March 6, 1894. O. S.,—discoloration of the iris, pupil small and deformed; some posterior synechia. The anterior chamber cloudy. Descemetitis.—Descemet's membrane presents a fine, punctate appearance over a triangular space, whose apex is opposite the center of the pupil, and the base toward the lower portion of the cornea. The vitreous is hazy, with some flocculence, through which, however, the fundus of the eye may be seen to be in a normal condition. The affection came on without the least pain, and is an *iritis tranquille*, the quiet iritis of the English. V. =  $\frac{1}{4}$ . O. D., V. = 1. Emmetropia. The second premolar and first upper molar on the left are carious, anfractuous, and



sanious. The beginning of the trouble dates back twelve years, and is coincident with the breaking down of one of these teeth. The menses are regular. A gynecological examination made by her family physician showed the genital organs to be in a healthy state. No vaginitis, no metritis. Consequently the menopause or any genital affection may be eliminated as the cause of the iritis, on account of the age of the patient and the healthy state of the genital organs. No catamenial troubles. General health good ; no dystrophic troubles, no scrofula, no rachitis, no syphilis. In the absence of all the usual causes of keratitis punctata, I felt authorized to consider the dental lesion as the cause, and felt no hesitation in advising the extraction of the unsound teeth. This took place March 17. Up to this time the treatment had consisted in the application of hot compresses, and the careful instillation of atropine for the purpose of preventing a possible glaucoma. The following is the note that, at my request, the dentist sent me concerning the patient : "The roots of both premolars and the first molar on the left were infected as far as the tip. They presented no cysts at their extremities, and the infection did not seem to have attacked the alveolo-dental ligament, since there was red infectious arthritis. The only thing worthy of note was the red appearance of the roots, which seemed to indicate a beginning fungoid inflammation."

On March 18 the visual acuteness had reached one-third, and on the 20th of the following April it was two-thirds, with difficulty. After two renewals I stopped the atropine that I had thought necessary to repeat, because of the reformation of new synechia.

May 10.—V. =  $\frac{2}{3}$ . The fundus is clearly visible. No discolored plaques in the equatorial region. Pupil normal.

Eight months later, the same conditions ; a pronounced punctuation of the cornea still persists. No synechia.

In spite of the reservations made in the subjoined note, I have no hesitation in saying that there was, in this case, a metastatic irido-choroiditis, slight, it is true, which was ameliorated as soon as the focus of infection was destroyed. The visual acuteness being still defective ( $\frac{2}{3}$ ), from the exudative mass still remaining deposited upon Descemet's membrane, testifying to an infectious process which had developed there at some time.

In order to show how great a number of channels unite the alveolar border with the orbital region, thus multiplying the communications between the one and the other, and consequently rendering the orbit more and more accessible to infection, I will here recall M. Parinaud's *memoire* upon "Suppuration of the lower lid and the vicinity of the lachrymal sac, of dental origin," (*Arch gén. de méd.*, June, 1880). M. Parinaud has demonstrated perfectly that in adults, and more especially in children of five or six years, when they are beginning to lose their temporary teeth, dental lesions, although at times but slightly apparent, may be the starting point of osseous or periosteal changes of the inferior orbital border; of fistulæ in the region of the lachrymal sac, the latter often being attacked consecutively; of fistulæ of the lower lid, and also periostitis of the nasal canal. Abadie (*Journal d'ophtal.*, 1872) has already called attention to this chronic periostitis, which may propagate itself to the nasal canal. Galezowski also (*Rec. d'opht.*, 1873) cites a case in which a lachrymal tumor, with necrosis of the walls of the nasal canal, was maintained by a carious tooth. M. A. Terson (note manuscript), in 1892, attended a woman suffering from a simple lachrymation, unilateral, without dacryo-cystitis, that the passing of sounds had not at all improved after five or six treatments. There was a slight narrowing toward the lower part of the lachrymal canal. Before proposing extirpation of the palpebral lachrymal gland, M. Terson carefully examined the teeth on that side, and discovered that the canine was irregularly placed in front of, and over, the two adjoining teeth; the greater part of the root being bare and reaching high up. This tooth was extracted on the following day and the patient was entirely cured without the further passing of sounds and in a very positive fashion. In quoting this case, which evidences a relation between lachrymation and dental irregularity, I would not wish to appear to furnish an argument for the advocates of the reflex theory; in this case I would simply retain the *clinical fact* which does its part in contributing to the intimate relation

that exists between the canines and the orbital and lachrymal regions. Regarding the nature of the lesion and its pathogenesis, it could be maintained, but without positive proof, that it acted as a simple reflex phenomena due to irritation of the trigeminus, which I would still accept, as I have said in the beginning of this article ; nevertheless, my distrust of this reflex action leads me to note that the root of this tooth was denuded, an altered condition that is far from excluding alveolo-dental periostitis, and consequently infection. Furthermore, this tooth was placed above and in front of its two neighbors ; its apex was then in contact with the inferior portion of the nasal canal, which it could constrict either mechanically or as the result of inflammatory stricture, which in turn ought to cease with the removal of the diseased or misplaced tooth.

The explanation, the pathogenesis of the facts reported by M. Parinaud, arises from an anatomical reason, suspected by M. J. Lucas-Championnière, and made evident by MM. P. Reynier and Parinaud, which it will be of use to recall here. The pus did not reach the orbit by raising up the periosteum ; there was not any periostitis ; *the pus spread through the bone itself*. It may be easily shown by means of injections that there is a communication between the cutaneous fistula and the alveolar orifice. Pus accumulating at the bottom of the alveolus could perforate it as in the ordinary fistula, but it could not destroy the alveolar walls, and then make a passage through the canalicula, which starts from the summit of the alveolus of foramen, to come out one at the supra-orbital foramen, the others at one, and sometimes two, sufficiently large orifices situated in front of the lachrymal sac, upon the ascending branch of the maxillary in front of the lachrymal canal. And it is especially in the alveolus of the canine that this communication may be noticed. These canaliculæ correspond with the nasal fossæ at the level of the insertion of the inferior turbinated and the inferior orifice of the nasal canal. Upon the ascending branch of the maxillary are frequently found secondary orifices which open directly into the nasal fossæ



or maxillary sinus, so that the pus may reach the orbital region by passing through the sinus, or by avoiding it. In the case of children, it should be recalled, and M. Parinaud insists on this point, that the sinus has not the same dimensions nor has it the same relations as in the adult. It is obliterated in some measure by the development of the alveolar process during primary and secondary dentition. The relations of the alveoli vary according to the age of the patient, but at any given time the alveolus may ascend to the level of the border of the orbit. The alveoli of primary and secondary dentition are more or less exactly super-imposed upon each other, and often communicate with each other immediately by an orifice which gives passage to a vasculo-nervous bundle, after the resorption of the partition, so that a large alveolar canal may be seen extending to the orbit. This arrangement is especially marked in the canines, so that they are with some reason commonly called *eye teeth*.

After this rapid review of the accidents that may result from infectious lesions, particularly osteo-periostitis and alveolo-dental periostitis, we are presented with prognostic considerations of undoubted gravity. The infection may remain localized, it is true, but it may also become diffused through different channels. Whether these pathogenic agents follow the venous or lymph channels, they progress more or less rapidly according to the general state of the patient (a question of soil), and in their progress reach the sinuses of the face. The base of the skull itself is not an impassable barrier, for we have seen that they have found a passage by means of the veins of the foramen ovale, and even through the vault of the orbit (see Panas' case); and once within the cranial cavity they provoke cerebral lesions to which the patient will in a short time succumb.

I have not purposely made this prognosis gloomy. Death may be the consequence of similar lesions, and if the patients escape, which is fortunately not infrequent, they may be tormented all their lives with a sinusitis or an empyema which most frequently resists all treatment, and

is from this time on a source of perpetual menace to these unfortunates ; it is the spark that may kindle a conflagration at any instant. Not to overstep the limits of this subject, I pass in silence all the infectious accidents that may result from the transmission of the infectious germs to the respiratory and digestive tracts. That is a chapter of pathology which I will only mention.

It is readily conceivable that such a prognosis should make us look upon lesions of the alveolar border as demanding as immediate and as energetic treatment as is possible. And it would render an immense service only to understand the great importance of the hygiene of the mouth, and with what prompt and assiduous care all dental lesions ought to be treated. It is in the propagation of such ideas that a better prophylaxis will be brought to bear on these grave affections which we have been studying.

Having said this much I would in conclusion formulate the following propositions :

Ocular affections having their origin in dental lesions and sinusitis, are by nature infectious ; some, nevertheless, seem to be excepted, and are said to be reflex in nature.

The actual facts of general pathology lead us to accept these reflex ocular troubles, only with reservations. I do not deny that some are not able to withstand investigation, and yet do not seem to be wanting in the proper and necessary characteristics that would class them among ocular troubles of an infectious nature, but this latter group is decreasing more and more to the detriment of the already diminished group of reflex accidents proper, without entirely absorbing them. Troubles of secretion, vasculo-dilatation, and vasculo-constriction may certainly be produced : the whole modern conception of nervous physiology—I mean the theory of neurones—authorizes this perfectly ; the peripheral or sensitive neurones being able to transmit to the central neurones impressions and sensations leading by a reflex impulse to the manifestation of secretory or vascular troubles. But there the purely reflex influence stops, and here is a very

delicate point in the question which it is important should be brought out: Does not this reflex trouble, whatever it may be, pass away, having conducted itself in the individual as a simple laboratory experiment, purely experimental, without sequelæ, without consequences more or less prolonged, developing itself, attaining its height, afterward diminishing and disappearing, leaving the organ perfectly normal and capable of resuming its functions as before with no souvenir of what has passed? This is possible in certain cases; but if the individual is not perfectly healthy, if he is not exempt from all diatheses, from all infection, and all defects, so that the microbes may be localized or retained within the organism, or so localized that their toxins or ptomaines only may be diffused in the blood or lymph, then the reflex phenomena, *analagous to traumatism*, and as a *secondary cause*, would by their modifications of the soil, favor a microbic evolution which would not *inevitably occur without them*, but would be produced *because of their existence*. This evolution might not take place, it is true, but there would then fortunately intervene a phagocytic power that would prevent this tendency, this *primum movens*, from having its full and entire effect. In these cases, reflex phenomena and infection will be joint, but not inseparable, terms; and in the other cases, which are perfectly supposable, the reflex phenomena may present the initial symptoms, and be the inseparable function of the infection.

Such are the conclusions which, I believe, ought logically to be deduced from this study.



## MATERIA MEDICA OF THE NOSE AND THROAT.

BY A. WORRALL PALMER, M. D.

### NATRUM MURIATICUM.

\***C**ORYZA fluent, changing to stopped, feeling of dryness or occasional sudden discharge of clear water with constant lachrymation from obstruction of lachrymal duct, with dry cracked lips or vesicles thereon, weight on forehead on rising in morn, chills along back in morn or periodical, patients prove to be chilly, sad, and despondent. \*Nasal catarrh, with very profuse thick yellow discharge (*puls.*), *with complete loss of smell and taste*; post-nasal dropping < in morning and in fresh air; catarrhs caused by abuse of local applications, especially nitrate of silver.

In naso-pharynx and pharynx we find it beneficial in \*herpes; \*hypertrophy of tonsils; \*follicular inflammation, and \*both humid and dry catarrh. In the latter the mucosa is dry, glazed, feels dry and smarting, despite frequent hawking of transparent mucus; in both, *morning* < *loss of smell and taste*, elongation or relaxation of uvula and occasional < in strong salt air. It is the more surely indicated if the patient's skin has a dead, colorless appearance, with comedones, the lymphatics are somewhat inflamed and indurated. A case of humid catarrh with above indications was virtually cured under the author's observation.

### ACIDUM NITRICUM.

**Nares.**—(*Objective*).—\*Herpetic eruption on wings or tip of nose, tip red and covered with vesicles. \*Dark or

yellowish white offensive diphtheritic membrane ; discharge offensive, watery, excoriating nostrils and lips. \*Syphilis—mucosa granular, or ulcerated ; also cartilages or bones ulcerated (*aur.* ; *graph.* ; *kali i.* ; and *merc.*) ; anterior and posterior acrid bloody discharge, when < by the mercurials ; obstruction of Eustachian. \*Polypi, associated with profuse hemorrhage. \*Papillomata. \*Scrofula with symptoms similar to syphilis.

(*Subjective*).—*Stitches on touch*. S. in root, which is swollen, < sneezing and coughing. Soreness in nostrils and wings. Itching in nostrils. Sneezing every day without coryza.

(*Discharge*).—*Coryza, with soreness within nose and bleeding* (*Graph.*). \**Stopped coryza, or catarrh with stoppage of nose*, watery or fetid mucus only from posterior choanæ. Stopped coryza, with dryness of throat and nose with swollen inflamed alæ. \**Fluent coryza, with obstruction of nostrils*, with difficult breathing even through the mouth, with sticking in throat on swallowing. (*Arum trif.* = excoriating discharge without sharp stitches. *Mur. ac.*)

\*Acute purulent rhinitis of children.

(*Epistaxis*).—Blowing of blood in morn. Bleeding at night.

**Naso-pharynx and Pharynx.**—(*Objective*).—\*Diphtheria, high fever, nausea, vomiting, membrane on tonsils and posterior wall of pharynx, sensation of foreign substance on swallowing and cutting pain ; *white patches on tonsils, thin back throat, thin inside mouth and lips* ; deposit becomes yellowish, tongue yellow, with red tip and margin.

Swelling of tonsils, uvula, and arch of palate separately or together with pain and injected vessels.

\*Syphilis, acquired or congenital, irregular deep ulceration, exuberant, easily bleeding granulations, fissures at angle of mouth with burning and sticking like splinters. \*Ulceration of glosso-epiglottic or pyriform sinuses.

(*Subjective*).—*Morsel sticks in pharynx when eating, as if pharynx constricted*. *Sticking* (*kali c.*, *hepar*,) on long talking ; in tonsils, with burning in fauces and behind uvula.

\**Swallowing difficult and painful*, as if throat swollen, raw, and ulcerated, with salivation. (*Baryta c.* = as if food forced over sore spot. *Apis. m.*, *hepar. s.* = stitch extends to ear. *Sulph.* = contraction or stitch.)

\*Rheumatic soreness of palati muscles, following influenza. (*Cimic. r.*; *rhus t.* = rheumatic pains.)

**Larynx and Trachea.**—(*Objective*).—\**Lupus*. \**Tuberculosis*; mucosa hyperæmic, or anæmic, sometimes extensively ulcerated, great irritation, violent, dry spasmodic choking, exhausting cough, with knife-like pains in left side.

(*Subjective*).—\**Syphilis*, *plaques muqueuses*, hoarseness < by speaking; barking cough, with offensive blood-streaked expectoration, and stinging, sharp, sticking pains.

(*Cough*).—Dry, rough cough before midnight. \**C.* < fore part of night, with feeling as if chest too full or bound with iron band. \*Fatiguing paroxysmal night co. caused by laughing or crying; great exhaustion.

**Characteristics and Concomitants.**—Especially useful in aged persons, or in diseases caused by syphilis, scrofula, or mercurialization; adapted to lean individuals, with dark skin, eyes, and hair.

Despondent; vexed at trifles.

Headache, as if head tightly bound; hair falls out.

Voice echoes in ears; offensive purulent otorrhea.

Pimples on side of tongue; foul odor from mouth; profuse salivation; sticking pains.

\*Swelling of parotid and submaxillary glands; pain in submaxillary glands.

Ulcers around corner of mouth.

Bitter taste; bitter sour vomiting; desire for fat, herring, chalk, lime, or earth.

*Urine fetid; smells like horses' urine.*

Acid, offensive, greenish, or brownish leucorrhœa.

Stitches or soreness in chest.

Aggravation before midnight.

#### NUX VOMICA.

**Nares.**—(*Subjective*).—Anterior angles or margins of nostrils feel ulcerated or like a cut wound, > eve.



Nostrils sensitive internally (*hydras.*). Heat and premonitions of coryza. \*Hay fever, nightly asthmatic attacks.

(*Discharge*).—*Sneezing in morning, but after rising sudden fluent coryza. Coryza with headache, heat in face, chilliness and much mucus in throat. Mucous discharge from nostrils seemingly obstructed by dry catarrh, also from one nostril. Mucus without coryza. Bloody mucus. Acrid fluid. Coryza, first stage, usually dry, caused by dry, cold weather, or sitting on doorstep; nostrils alternately open or obstructed; nose dry, especially toward morn; sometimes fluent in day and dry at night, with sneezing, lachrymation, and scraping roughness in throat; tickling in larynx, causing dry cough; < in house, < in open air. (Cepa. and puls. = discharge < in house. Merc. = rawness and scraping in nose and throat, < in damp weather. Puls. = later stage, discharge green and bland).* \*Coryza in nursing infants, preventing nursing.

#### MERCURIUS ·PROTO-IODATUS.

With the exception of diphtheria it is only useful in catarrhal difficulties and these again only above the larynx: \*catarrh of frontal sinuses, dull, boring, pressing, and bursting pain over the eyes (*kali bi.*) with offensive discharge; \*on removal of scabs from nostrils an ulcerated surface covered with yellow pus is left, \*thick hard plugs from nares, obstructing breathing, especially the right; \*catarrh of posterior portion of nares, naso-pharynx, and pharynx, tissues reduced and thickened, constant post-nasal dropping (*spig.*), discharge yellow purulent and rather profuse (*puls.*), tenacious, difficult to dislodge, causing retching (*kali bi.* and *nitr. ac.*) occasional disagreeable odor and constant ineffectual desire to swallow.

\*Pain in right tonsil with swollen sensation and dysphagia; \*lobulated hypertrophy of tonsils with deep interstices, < on right, with thickening of pharyngeal membrane. In diphtheria it is one of our best remedies, indicated by the following symptoms: \*yellow exudate on

tonsils, or faucial pillars, all mucosa in sight is swollen, red, soggy; salivation, the characteristic *yellow, furred tongue*; considerable swelling of cervical lymphatics; hawking thick mucus from mouth; slight disagreeable odor of breath. \*Tuberculosis of pharynx and larynx accompanied by much congestion, swelling, and redness.

#### MERCURIUS SOLUBILIS.

**Nares.**—(*Objective*).—*Offensive odor from nose as in violent coryza (aur. met., graph., nitr. ac., puls.)*.

\*Coryza, nose swollen and red, alæ and columella excoriated, sneezing and watery discharge [See Naso-phar., *Obj.*]. \*Phlegmonous inflammation of mucosa.

(*Subjective*).—*Pain in bone when taken hold of (aur. met., hepar s., kali iod.)*.

Frequent sneezing *without* fluent coryza.

(*Discharge*).—\*Catarrh with thin acrid mucus, d. excoriating nostrils, occasionally green and < at night (*kali iod.* and *natr. mur.*). \*Ozena, offensive odor in nose and soreness of the bone.

(*Epistaxis*).—*During sleep (carbo v. and kali carb.=in morning)*. During cough.

**Naso-Pharynx and Pharynx.**—(*Objective*).—Coppery redness of soft palate and uvula, and superficial ulcer on left side (*kalies*=deep ulcerations). \*Accompanying coryza is inflammation of pharynx, larynx, and trachea with yellowish-gray or thick, muco-purulent, irritating discharge. \*Acute catarrh, mucosa dull red, swollen, tongue thickly coated white, imprinted by teeth, salivation, and swelling of anterior cervical glands. Dr. Ivins considers it "almost a panacea for subacute pharyngitis." From the first centesimal trituration of this drug I have obtained the best results in old neglected cases of follicular pharyngitis, when the walls are one complete mass of inflamed follicles and great congestion and thickening of entire surrounding mucosa and tonsils. \*Syphilitic abscess, large, flat, pale, with dark red areola and painful tumefaction of tongue. \*Erysipelas of pharynx. \*Uvulitis.

(*Subjective*).—Something hot comes into throat. Sticking in tonsils on swallowing (*apis m.*, *hepar s.*, *nitr. ac.*). Sensation of something sticking in throat. *Dryness and pain as if tight posteriorly, with pressure in it on swallowing, yet obliged to swallow constantly, because the mouth is always full of saliva* (*bell.*=dryness with constant desire to swallow but interfering with the same). Inability to swallow liquid below the larynx, it returns through the nose. \*Acute catarrh with metallic odor and taste, lancinating pain to ear during deglutition and pain in cervical glands. \**Quinsy*, parenchymatous form, with throbbing, stinging pains, *sticking on swallowing*, thin, pseudo-deposit in tonsil and pharynx (*hepar s.*, *sil.*).

**Larynx and Trachea.**—*Objective.*—\*Chronic laryngeal catarrh with mucosa swelled and livid, and hoarseness in strumous and syphilitic patients. \*Lupus of ulcerative variety in syphilitics. \*Superficial syphilitic ulcerations. \*Congenital hereditary syphilitic lesions.

(*Cough*).—Ringing c., feels as if everything in chest were dry, with pain chest and small of back. Dry, short fatiguing c., from tickling beneath upper part of chest. \*Chronic laryngitis and bronchitis with *violent nocturnal c.*, sometimes spasmodic, always < lying on left side (*ars.*=night c., must sit up to stop it. *Calc. c.*=loose c. at night and *dry* in day).

**Characteristics and Concomitants.**—Syphilitic and strumous individuals, bilious temperament.

Weakness of memory; constant anxiety and apprehension.

Head aches as if it would fly to pieces < at night.

Scrofulous ophthalmia; nightly agglutination of lids.

Sounds vibrate in ears; purulent aural discharge.

\*Tooth-indented tongue and salivation; gums spongy and bleed, recede from teeth; bad odor from mouth.

Face sallow, earthy. \*Submaxillary and cervical glands are swollen and hard.

Empty, bitter, acrid, or rancid eructations; weakness of digestion with continuous hunger; soreness over the liver.



Slimy, bloody stools with tenesmus ; prolapsus ani.

Leucorrhœa, white or purulent, mild or acrid.

Pains in lumbar region ; *pains in shin bones* ; rheumatic pains ; tearing and stinging, especially in limbs and joints < at night with profuse perspiration which relieves.

Tremor of hands.

Perspiration during sleep ; excessive secretion of skin, mucous membranes and glandular organs ; *general sensitiveness to air*.

*Nocturnal* aggravation.

Acridity of all secretions.

**Naso-pharynx and Pharynx.**—(*Objective*).—\*Folliculitis, with atrophic white patches size of pea, with inflamed follicles ; easily gags and retches ; laryngeal tickling of reflex pharyngeal origin, < by tobacco smoke. \*Uvulitis. \*Chronic naso-pharyngeal catarrh.

(*Subjective*).—*Rawness in fauces ; provoking cough on swallowing and inspiration of cold air. Raw, sore pain at palate. Scraping, as after heartburn.* Scraping in throat and at glottis. No scraping when swallowing. Sharpness in coughing, causing pain in pit of throat. Spasmodic pain from pharynx to pit of stomach in morn. (*Rhus t.* = soreness extending to stomach on swallowing.) Constriction of pharynx. \*Tickling at orifice of Eustachian. \*Chronic catarrh, associated with gastric disturbance, with raw, sore, rough, scraping feeling in throat, and sensitiveness to pressure in supra-sternal fossa, and loose cough, with thick, grayish expectoration. \*Hyperæsthesia.

**Larynx and Trachea.**—(*Objective*).—\*Asthmatic attack toward morning. (Zing. = asthma humida, < at night). \*Vocal bands dull, lusterless ; fullness and tickling, in acute or subacute laryngitis following pharyngitis. \*Recommended in angiomata. \*Useful in post-typhoid and typhus difficulties.

(*Subjective*).—*Roughness and scraping ; provoking cough.* Dry, painful catarrh in eve, before sleep, or in morning, with heat in hands and feet ; then general sweat, relieving

catarrh. Itching, causing cough. Dyspnœa morn and eve. Dyspnœa at night on waking from frightful dreams.

(*Discharge*).—Adherent mucus high up, especially in morn, causing stuffiness of chest and cough.

(*Cough*).—Tickling, itching in middle sternum on expiration. Night c. preventing sleep. (*Puls.*). C. causing sore, sticking headache, as if head would burst, or bruised pain in upper abdomen. *Violent c. in morn before rising, with expectoration of clotted blood, and aching in chest. Dry c. from midnight till morning.* Violent paroxysms in eve after lying down, and in morn. C. dry and fatiguing about midnight, if lies on back; > lying on side. Tight respiration causes hacking c. \*Irritable c. coming on in morn, > by warm drinks; sometimes with involuntary micturition. \*Reflex c. < after mental work, or associated with indigestion, always after eating, with soreness over stomach. \*Pertussis < toward morning, cold air, eating, or drinking.

**Characteristics and Concomitants.**—Adapted to persons of choleric, sanguine, malicious, irritable temperament, sedentary habits; good for ill effects of spirits or coffee, and mental over exertion.

Sensitive to external impressions; *e. g.*, noises, light, etc.

Vertigo, with vanishing of sight; loss of hearing and whizzing in ears.

Sick headache; headache from wine or mental exertion; as if nail driven in vertex.

Mouth sore and dry; tongue coated white.

Sour and bitter eructations; nausea and some vomiting; weight in stomach.

Cutting in abdomen; ineffectual urging to stool; stool hard and light-colored.

Frequent inability to sleep after 3 A. M.; < in morning.

#### PHOSPHORUS.

The curative field of this remedy is principally in larynx and trachea. In the nares it has cured \*easily bleeding polypi; in nose and pharynx, degenerative changes shown by \*slowly oozing expistaxis, or that accompanying fever,

jaundice, or in hemorrhagic diathesis ; \*necrosis of nasal bones and \*hemorrhages and ulcerations of pharynx. In the larynx is \*aphonia with anæmia, vocal bands relaxed, great sensitiveness, threatening phthisis, < in eve ; \*acute laryngitis, cordæ vocalæ congested, thick, heavy looking ; slight hoarseness, or even aphonia ; constant tickling cough, which is caused by speaking, laughing, eating, or drinking ; < at night, or by lying on back or left side ; pain and roughness in larynx, < by cough. \*Chronic laryngitis ; vocal cords highly injected or dirty yellow ; occasional abrasions ; whole mucosa is dark red, swollen, or thickened ; inspired air causes rawness, soreness, and dryness (*natr. c., sil.*) ; voice easily fatigued, hoarseness or aphonia, < in eve ; hoarse, harsh cough, with scanty expectoration ; \*in phthisis laryngis, phos. and ars. iod., I consider, stand as the two greatest benefactors. There is anæmia of the mucous membrane, rawness or soreness, especially on speaking ; coughing, and pressure ; inspiration wheezing, pressure across the upper part of chest, hoarseness, short, dry cough, sweats, bloody expectoration ; < on retiring at night or rising in morning. \*Chronic tracheitis ; cough seems to come from stomach ; \*laryngo-tracheal sequelæ of typhoid. \*Lupus.

## PHYTOLACCA.

This drug exerts most of its curative powers upon the pharynx and naso-pharynx, still in the nares it relieves \*ozena on a specific base, persistent excoriation of nostrils and lips, purulent discharge, \*catarrh, with pain at root of nose (*kali bi.*), with alternate stoppage of nares ; \*scrofula similar to ozena ; \*throughout whole tract, but principally in uvula, velum, and tonsils ; are secondary syphilitic ulcerations of punched-out appearance, malodorous ptyalism and loose teeth ; \*diphtheria, mucosa purple (*lach.*), involving both sides ; false membrane, grayish (*acid carb., kali bi., ac. mur., ac. sulph.*), heavily furred, thickened tongue ; aching in limbs and back ; albuminuria (*an., canth., merc. prot.*) ; scanty red urine ; great prostration (*ars. iod., canth., mur. ac.*) ; < by hot drinks. \*Acute



catarrh of naso-pharynx or pharynx, with dark red or purple mucosa, and occasionally ulcerated, or a dark, pseudo-membrane; swelling of soft palate and tonsils; severe pain in root of tongue, which is rough and sore on edges and very red at tip; throat feels full, dry, rough, and smarting; swallowing causes feeling of lump (*alum* = lump, mucosa red, but dry), and severe shooting in ears; thick, tenacious saliva in fauces, causing hawking and cough, accompanied by rheumatism, neuralgic pains, headache, and swelling of the lymphatics; chronic catarrh of same, with dryness, rawness, and scraping; sensation of ball of fire in throat, continual desire to clear throat, stiffness of neck muscles, and pain in back; swallowing causes severe pains into ears; \*quinsy, tissues dark purple, almost blue, uvula œdematous, pain into ears, alternate chills and fever, with prostration, in rheumatic individuals; \*laryngitis, with dry, croupy cough, burning in larynx and trachea, accompanied by tonsilar hypertrophy; < at night, and occurring in cold, damp weather (*merc. s.* and *rhus t.*). By Dr. A. C. Cowperthwaite it is considered a preventive of carcinoma; it having dissipated the painful glandular nodosities which are so frequently a precursor of the same.

#### PULSATILLA NIGRICANS.

**Nares.**—(*Objective*).—\*Third stage of phlegmonous rhinitis. \*Scrofula.

(*Subjective*).—Pain, as if bones were forced asunder (*acon.*; *kali bi.*; *merc. prot.*; *natr. ars.* and *plat.*; = pressure at root). *Sneezing* in sleep or morning before rising.

(*Discharge*).—\*Coryza, latter stage, yellowish-green, thick, bland; often fetid discharge, < in P. M.; > in open air, stoppage in eve. Loss of smell, but rarely loss of taste. (*Apis m.* thick, bloody-white fetid discharge. *Natr. c.* = thick, yellowish-green, but < in forenoon.)

\*Chronic nasal catarrh, with yellow discharge, especially < in eve, with usual puls. disposition. \*Atrophic catarrh, discharge offensive, changes color and consistency frequently.

\*Catarrh or empyema of antrum, with orange-colored discharge, especially from right nostril, of an urinous odor.

(*Epistaxis*).—\*Venous or passive, accompanied by varicose pharyngeal veins, vicarious or suppressed menstruation.

(*Olfaction*).—\*Parosmia.

**Naso-pharynx and Pharynx.**—(*Objective*).—\*Chronic catarrh, with varicose veins (*ham.*; *natr. ars.*; *phyto.*; *vespa.*), sometimes with stinging in throat. \*Retro-pharyngeal abscess after evacuation.

\*Hemorrhage, passive or venous, accompanied by varicose veins or suppressed menstruation.

(*Subjective*).—Raw pain posteriorly, with drawing in cervical muscles. Rawness and scraping, with dryness of mouth. Pressure on swallowing, with tension. Constriction. Sensation as from sulphur fumes, when coughing. Dryness, with scraping, causing paroxysmal cough. Dryness extending as far as tip of tongue, especially in morning (without visible dryness), with thirst, but can drink little, because it distresses him and causes nausea.

(*Discharge*).—Throat covered with tenacious mucus in morning.

**Larynx and Trachea.**—(*Objective*).—\*Aphonia, reflex, rarely catarrhal. \*Abscess after evacuation.

(*Subjective*).—Scraping in epiglottis, as in hoarseness. Aphonia and hoarseness (*phos.* = ditto, with soreness and roughness; < in eve and night.

(*Discharge*).—*Yellow expectoration, with cough.* Bloody expectoration. Violent cough, with difficult, scanty expectoration of tenacious mucus.

(*Cough*).—*Dry c. with lachrymation caused by tickling and scraping in larynx.*

C. from dryness or scraping in trachea. C. caused by itching from pit stomach to epiglottis. C. from constriction of larynx, < after eating.

C. with oppression of chest, but without expectoration. C. caused by inspiration. *Constant evening c. after lying down. Night c. causing dryness of throat, and exhaustion*

*and preventing sleep. Dry c. at night, > sitting up, returning on lying down (con. m.; hyos).*

**Characteristics and Concomitants.**—Lymphatic constitution, phlegmatic temperament, suited especially to females, or persons with blue eyes, affectionate, easily excited to mirth or tears, yielding disposition and melancholy.

Vertigo, especially when sitting.

Throbbing pressing, headache < by pressure, gastric headache, pressing pain in frontal region.

Hordeolum, agglutination of lids.

Severe forcing out pain in ears.

Putrid taste, < in morning, sweet saliva, breath malodorous, toothache, < by warmth and > by cold water.

Bitter, bilious, or sour eructations; eructations of ingesta; water brash; vomiting long after meal; gnawing sensation or pulsation in stomach.

Flatulence, weight as from stone in abdomen before menses.

Involuntary micturition, with cough.

\*Menses scanty, late, and pale, with atrophic catarrh; mild, thick, or acrid, thin, milky leucorrhœa.

Migratory rheumatic or neuralgic pains.

Feeling of discomfort all over in morning on rising, disappearing in moving about.

Aggravation in evening, lying on left or painful side, and before or during menses. Amelioration in open air and gently walking about.

Dr. Ivins remarks that "the results are often disappointing, unless there be the mental and general symptoms, to indicate the drug."

#### RHUS TOXICODENDRON.

acts mostly upon the cellular and glandular tissues, but little upon the mucous membranes. In the nares we find it indicated in \*glanders; \*catarrh, greenish offensive discharge, accompanied by severe aching in all the bones, and when caused by dampness; \*erysipelas of pharynx and larynx; \*membranous or croupous pharyngitis; \*œdema



of the fauces, with restlessness and hard swelling of parotid or submaxillary glands, and sticking on swallowing; the tip of uvula appears like drop of fluid or jelly, especially in rheumatic persons or during erysipelas. \*Diphtheria, pseudo-membranous, bloody, and dark, glandular and cellular involvement, sometimes suppuration; drooling occasionally of bloody saliva during sleep, restlessness and desire to be carried, post-diphtheritic paralysis of pharynx or larynx causing dysphagia or dysphonia (*gels.*; *zn. phos. 2x* = post-diphtheritic paralysis). \*This and *cimic. rac.* are our cardinal remedies in rheumatic pharyngitis (*colch*). \*Anæsthesia of pharynx (*caust.*; *gels.*). \*It has relieved sequelæ of typhoid pneumonia, such as \*stenosis of larynx, \*hæmoptysis, \*chronic hypertrophy of larynx, \*papillomata, etc.; \*short, racking cough from tickling and irritation under upper half of sternum, < before midnight in damp weather, with pain in back and limbs and restlessness; \*aphonia or dysphonia from long use of voice, with aching and tired feeling in larynx; < the longer at rest and > by short or slight use. \*Tracheal syphilis.

## ABSTRACTS FROM CURRENT LITERATURE.

**Mellinger and Bossalino.—Experimental Study of the Distribution of Liquids Injected Beneath the Conjunctiva.**—*Arch. für Augenheil.*, xxxi, i, 1895.

The authors have carried on their investigations by injecting a sterilized solution of India ink beneath the ocular conjunctiva of white rabbits. After a variable length of time the animals were killed and their eyes submitted to microscopical examination. These examinations showed that the liquid followed the greater lymph channels, spreading along the ocular muscles and across the space of Tenon. In this way it encircled the whole globe of the eye, reaching, by the natural channels of communication, vessels and nerves, the sclerotic on one side and the sheath of the optic nerve on the other. Their experiments lead these authors to believe that liquids injected beneath the conjunctiva may penetrate even to the supra-choroid and inter-vaginal spaces, and that it is possible in this way to explain the positive therapeutic effects obtained by the use of subconjunctival injections.

DEADY.

**Hilbert.—Color Audition.**—*Arch. für Augenheil.*, xxxi, i, 1895.

The patient, a young man of twenty-two, has a peculiar color sensation at every stroke of the clock, if this happens to occur when he is just falling asleep either in the daytime or night. The sensation is that of a bundle of light, conical in form, clearly defined, and of a beautiful rose color. It extends obliquely across the field of vision, the base of the cone in the upper right hand, the apex in the lower left hand corner. It seems to be an ornament to the clock, and is apparently about a foot in length. The patient presents no other synoptic phenomena. The author considers that this case helps to sustain the atavistic theory of double sensations.

DEADY.

**Von Hippel.**—**The Pathological Anatomy of Central and Perinuclear Cataracts.**—*A. Von Graefe's Arch.*, xli, 3, 1895.

On account of central perinuclear cataract, the author's father extracted both crystalline lenses from a woman of thirty-two, and for the same cause performed the same operation on her little daughter, aged three. Two other children of this patient are victims of congenital cataract. The four lenses were examined microscopically, and the results show conclusively that perinuclear disease is due to little drops of varying size arranged in concentric layers between the crystalline fibers. In the central lesion the intensely white color in the living subject is shown microscopically to depend upon a considerable accumulation, in spots, of little drops of some substance colored a deep violet with hæmatoxyl'n. The nuclei were studded with little white drops resembling those found in the crystallines examined by Schirmer, Hess, and Peters. The nuclei also showed signs of pronounced sclerosis. They were but slightly colored, and markedly shrunken.

DEADY.

**Hirschberg.**—**Retinitis in Congenital Syphilis.**—*Deutsche med. Wochenschr.*, xxi, 26-27.

The author describes a peculiar affection of the retina due to hereditary syphilis. He has observed it in very young children, and reports six cases varying in age from five to eighteen months. It presents itself in the form of disseminated reddish points upon the retina, which increase rapidly in numbers. By energetic treatment the vision begins to grow better, and the points end by becoming entirely white. Poor vision is the only subjective symptom, and the little patient may not be seen until acute specific keratitis has set in.

DEADY.

**Sutphen, T. Y.**—**Recurrent Paralysis of the Third Nerve in Women.**—*N. Y. Academy of Medicine.*—*Am. Medico-Surgical Bulletin*, March 7, 1896.

The first, of two cases reported, commenced to menstruate before she was eleven years of age.

The first muscle to become affected was the levator palpebrarum of the right eye, which became paralyzed during one of her menstrual periods in her thirteenth year; the exact date is not given. This paralysis was preceded by hemicrania, accompanied by



nausea. Recovery was slow under large doses of iodide of potash. About two years later, in September, 1894, during the menstrual period, there was a recurrence of the ptosis, accompanied by a paralysis of the internus of the same eye, which, however, passed off in a couple of weeks without treatment. During November of the same year the same symptoms appeared, but gradually subsided, leaving, however, diplopia. On the following January she came under the care of the author, who found a general paresis of the muscles supplied by the third nerve, with the exception of the sphincter iridis.

Cylindrical lenses were prescribed to correct the refractive anomaly, and these seemed to exert a beneficial action on the diplopia.

The following November she again presented with a marked paresis of the superior, inferior, and internal recti. There were no lesions demonstrable with the ophthalmoscope. Recovering from this attack, she experienced a recurrence at the following menstrual epoch, vision at the same time being reduced to  $\frac{2}{7}$ . Partial recovery followed the exhibition of iodide of potash in ten-grain doses, slight diplopia and headache remaining. Vision was  $\frac{2}{3}$  with correcting glass.

The second case presented a history of repeated attacks of diplopia accompanying paralysis of the left internus and levator palpebrarum. These attacks were usually preceded by a left-sided headache, lasting for a number of days, and then disappearing. She commenced to menstruate at the age of fifteen, and the attacks recurred with fair regularity at each succeeding menstrual period for a year, at the end of which time she was first seen by Sutphen.

He found complete paralysis of the third nerve. Ophthalmoscopic examination gave negative results. Iodide of potash was administered, but was followed by no improvement.

RITCHIE.

**Oertel, T. E.—What to Send to the Microscopist, and How to Prepare It.**—*Am. Medico-Surgical Bulletin*, January 25, 1896.

Among the preparation of various other specimens, he gives the following instructions respecting the eye :

The specimen should be *fresh* and should be placed *entire* in a two per cent. solution of formalin, if obtainable, or into Muller's

fluid. No other agents are permissible. Tumors are immersed in either of the above mentioned solutions, or in undiluted alcohol. The latter is not desirable, as it exhibits a tendency to shrink and distort the tissues. RITCHIE.

**Ginsberg.—Idiopathic Serous Cysts of the Iris.—**  
*Arch. für Augenheil*, xxxi, 1, 1895.

In speaking of a cyst of the iris operated by Hirschberg, the author discussed the various theories in vogue, and basing his conclusions upon the microscopical examination of this case, agrees with Schmidt-Rimpler that non-traumatic cysts are due to a retention of lymph, and are therefore retention cysts.

DEADY.

**Schwarzchild, H. Davidson.—Orbital Cellulitis Produced by a Gunshot Wound of the Frontal Sinus.—***Am. Medico-Surgical Bulletin*, January 18, 1896.

The patient was a young man of twenty years. The left upper lid was red, tense, and greatly swollen, precluding the possibility of exposing the eye voluntarily. After gentle manipulation a sufficiently good view of the eye was obtained to satisfy the examiner that the tissues of the eyeball proper were normal. There was considerable chemosis, but no discharge; the eyeball was forced slightly downward, outward, and forward. Immediately above the eyebrow was a clean-cut circular wound, about one-sixth of an inch in diameter, the presence of which he seemed to be at a loss to explain, until he remembered that two days previous, while boating on the Harlem River, he experienced a stinging sensation in that particular spot, upon touching which he noticed that a drop of blood adhered to his finger.

During that night his eye commenced to pain him, with an accompanying swelling of the lid. Flaxseed poultices were applied for two days, at the expiration of which time he sought medical advice. He had had a chill, and when first seen his temperature was 103° F.

He was admitted to the ward of the hospital, and by gentle manipulation, a probe was passed backward and inward three-eighths of an inch, at which point it was obstructed by a mass of granulation tissue; this having been overcome, it passed onward until it reached the frontal sinus. It was evident that the foreign

body had penetrated that cavity, and was the cause of the mischief.

To relieve the pressure from the swollen tissue a deep incision was made, extending almost the entire length of the lid, and hot compresses were then applied. On the following morning there was a discharge of pus from the original wound, and also from the nasal extremity of the incision, following the establishment of which there was a reduction of temperature. The swelling and chemosis was lessened, but the discharge continued for a week, at the end of which time the original wound was enlarged by means of a bistoury, and the granulation tissue removed with a curette. This having been performed under an anæsthetic, and the opening into the sinus being too small to admit of ready exploration, it was enlarged by the aid of a mastoid gouge. The mucous lining was found to be swollen, and the cavity contained considerable pus. Probing revealed the presence of a foreign body imbedded in the soft tissues, which, upon removal, proved to be a large-sized bird shot. The cavity was irrigated and packed with bichloride gauze, sufficient space being left for drainage. The patient made an uneventful recovery.

RITCHIE.

**Webster, David.—Cholesterin Crystals Following Extraction.**—*N. Y. Academy of Medicine.*—*Am. Medico-Surgical Bulletin*, February 15, 1896.

Webster reports a case of the above occurring in a patient of fifty-seven years ; female ; married.

Simple extraction was performed, the operation itself presenting no marked peculiarities. Three weeks later she was readmitted to the hospital for discission. On cutting the capsule, which was very thick, the anterior chamber became filled with a number of minute white, shiny particles, which he considered to be the result of fatty degeneration of the vitreous. Vision with a  $+10$  D.  $\ominus +2.50$  D. cyl., axis  $15^\circ = \frac{20}{40}$ . Near vision equaled Jaeger No. 1, with the proper correction.

RITCHIE.

**Faber.—The Operative Treatment of Astigmatism.**—*Centralbl. f. p. Augenheil.*, September, 1895.

The patient was a young man, nineteen years of age, who had been declared unfit for military service because of amblyopia in the right eye. The test showed V.  $= \frac{4}{10}$ , myopia. 75 diopters, and



astigmatism 1.50 ax .60 from the temporal side. V. after correction  $\frac{4}{5}$ . Since the patient was very desirous of enlisting, the writer operated by making an incision of about 6 mm. or less in the sclero-corneal limb. The incision was made with an iridectomy knife in the direction of the axis of astigmatism. The pupil was kept contracted for three days with hydrochlorate of pilocarpine. Seventeen days after the operation the test without a glass showed V.  $\frac{6}{8}$ . Astigmatism .75 ax .30.

In speaking of the short time during which the patient was under observation, the author admits that the full and complete result of the operation could not be determined, but the object for which the patient came to him was accomplished, for he was declared fit for service.

DEADY.

**Seggel.—A Novel Case of Reflex Immobility of One Pupil.**—*Arch. für Augenheil.*, xxxi. 1, 1895.

The patient was a young man twenty years old. The pupil of the right eye was entirely normal, and reacted promptly to light, both directly and when the left eye was exposed to light. The left pupil did not give any reaction to light, and was found to be in a state of congenital myosis. The accommodative reaction of the left eye was preserved, and either cocaine or atropine caused dilatation of both pupils, the atropine causing less dilatation of the diseased pupil than of the other. The author points out the fact that the reaction to light does not return in the cocainized left eye. This is contrary to the rule established by Heddaus for reflex immobility of tabetic origin.

As in his first case, the author considers, as a cause of the congenital anomaly, an interruption of the conductibility of the centripetal pupillary fibers. It is also a fact that the existence of a myosis in the affected pupil forms a special complication. Pursuing his deductions he arrives at the denial of the existence of a dilator muscle. This has been recently demonstrated in the laboratory of Dr. Panas.

The author also presented a second case, in which there is a sluggish reaction of one pupil. In this case it was the right pupil in a man twenty-three years of age. Mydriatics as well as myotics act promptly and better even upon the affected pupil than upon the other. Here again the author believes that a congenital anomaly exists, and a difficulty in the conductibility of the centrifugal (motor) fibers of the left eye. The elliptical shape con-

stantly assumed by the pupil corresponds very well with this hypothesis.

DEADY.

**Panas.—Elongation of the Ocular Muscles in the Treatment of Non-paralytic Strabismus.**—*Rev. gen. d'Ophtal.*, xv. 1.

According to the author, the most frequent variety of non-paralytic strabismus is that which has its origin in the inco-ordination of the functional centers. Intermittent in the beginning, it finally becomes permanent, and it is, unfortunately, only when the functional loss of power has become considerable that the patient decides to consult a surgeon. Ametropia being a frequent cause of strabismus in nervous subjects, the wearing of a glass would be sufficient to cure the affection in its early stages. But the persistence of the inco-ordination of the motor nerve centers will produce an incurable strabismus. It becomes, at length, a modification of the muscles and its tendonous sheath, which leads to a shortening of the muscle, accompanied by an elongation of the opposite muscle. Operative procedures then become necessary, but simple tenotomy, the advancement of the antagonistic muscle and, in general, all operations which are directed only toward one eye are insufficient.

The principle of intervention rests upon the bilateral character of strabismus, and is intended to oppose the retraction of the aponeurotic sheath of the muscle and its wing, by submitting the muscle and its tendonous system to a sufficiently great elongation, and then cutting the tendon close to the sclerotic.

The operation is performed in the following manner: A vertical incision is made with the scissors in the conjunctiva, which leaves exposed the muscle and its insertion in the sclerotic. The muscle is raised on a hook, in order to detach it by lateral movements from the subjacent conjunctiva. Traction toward the opposite commissure is then made, and a classical tenotomy is performed, followed by catgut suturing of the conjunctiva. The same treatment is repeated on the other eye, and both eyes are covered with an occlusive bandage. The author cites five cases operated with success.

DEADY.

**Fuchs.—Atrophy of the Lids.**—*Rev. gen. d'Ophtal.*, xv. 1.

The case presented was a girl ten years old, who had suffered since infancy with atrophy of the upper lids. The atrophy attacked

only the subcutaneous cellular tissue, leaving the muscles intact. No errors of vision existed, and the only inconvenience was the disfigurement of the face. The treatment in this case will consist in excising and fixing the superior border of the lid to the tarsal ligament. The affection is probably of trophic nervous origin.

DEADY.

**Richter, P. V.—Intermittent Exophthalmos.**—*Arch. für Augenheil.*, xxxi, 1.

The patient was a young girl fourteen years of age. Since she was a year old she has had periodic attacks of exophthalmos. There was no history of traumatism. A marked exophthalmos occurs, particularly in the right eye, every time she stoops, and disappears in about a quarter of a minute after resuming the upright position. The fundus appeared to be perfectly normal.

DEADY.

**Durr.—A Simple Method of Destroying the Lachrymal Sac.**—*Arch. für Augenheil.*, xxvi, 3, 1895.

The author has observed 1362 cases of disease of the lachrymal organs among 14,106 patients, or about 3.3 per cent. In 331 cases the lachrymal sac was not affected. In 152 cases the sac was destroyed. Of these 152 cases 114 were due to dacryocystitis, 28 to non-dilatable stricture, and 10 to caries of the bone, etc.

The operation is as follows: The sac is opened by making an incision in the skin, beginning about 5 mm. below the internal palpebral ligament, and extending 2.5 cm. The handle of the bistuory is then raised, and the instrument is passed into the lachrymal sac and turned about so as to enlarge it in every direction. A small piece of Vienna paste is then wrapped in charpie, and introduced as deeply as possible into the nasal canal. Another piece of paste similarly protected is introduced into the upper part of the sac, and the caustic action allowed to progress for about a minute and a half. At least two weeks time is necessary for a cure. Only seven cases were not attended with success.

DEADY.

**Greeff, R.—Accommodation in the Blind Eye.**—*Klinisch. Monatsbl.*, September, 1895.

The patient was a boy seven years of age. The left eye was emmetropic, with normal vision. The right eye was totally blind, consequent upon atrophy produced by a tumor of the optic nerve.



The skiascope showed that the accommodation was absolutely equal in both eyes, for when the child was made to look at an object placed 25 cc. from the good eye, the instrument showed a myopia of 4 diopters for each eye. DEADY.

**Delevan.—A Case of Papilloma of the Larynx Cured by Applications of Absolute Alcohol.**—*Am. Medico-Surg. Bull.*, January 18, 1896, p. 87.

The patient was a lady fifty-five years of age, who, during the past two years, had been suffering from an increasing aphonia, which was now complete. She frequently expectorated small pink-colored, fleshy masses. Laryngoscopic examination showed a large papillomatous growth, particularly on the anterior half of the left vocal cord. The growth being quite extensive, and there being some question as to its true character an operation was not deemed advisable. The patient was therefore directed to use a spray of absolute alcohol six times a day. Improvement was soon noticed, the growth shrunk, and small pedunculated masses came away. After six months no trace of the growth could be found, and the voice and the larynx were normal. PEARSALL.

**Brewer, G. E.—A Case of Fatal Pharyngeal Hemorrhage.**—*Am. Medico-Surg. Bull.*, January 18, 1896.

"The patient was a well-developed, vigorous young man, who recently developed symptoms of an ordinary sore throat. An inspection showed some redness and swelling in the region of the left tonsil. There was pain on swallowing. The symptoms increased in severity, and the presence of a peritonsillar phlegmon was suspected. The case was regarded as a mild quinsy. A day or two later spontaneous rupture occurred, followed by a small amount of hemorrhage. The inflammatory symptoms subsided, but the hemorrhage recurred from time to time. The man felt well enough to go to work, and while sitting in his office a severe hemorrhage occurred, which resulted in syncope. It ceased spontaneously. That evening when I saw him for the first time, his pulse was 120; temperature, 100.5°. An inspection of the throat showed that the region of the left tonsil was slightly more swollen and congested than that on the opposite side; a small clot of blood was observed adherent to the posterior pillar; this was supposed to be the origin of the hemorrhage. Absolute rest in bed was advised, and a five-volume peroxide of hydrogen solution

ordered, to be used in case of future hemorrhage ; the following morning his pulse and temperature were normal. The nasal cavities were now examined, and were found to be apparently normal. On the posterior surface of the soft palate was a small, granulating surface covered by a firm clot of blood. Every other source of hemorrhage was excluded. Five hours after this examination, without apparent exciting cause, and while the patient was resting quietly in bed, a severe hemorrhage occurred, which was checked by the peroxide of hydrogen. About thirty-six hours later he had another, which was also promptly checked. A pad was now devised, by means of which firm pressure was made over the bleeding point. For six hours after this the patient did well ; he then had a fit of coughing, which was followed by a fatal hemorrhage. I have been unable to find in literature the record of any case similar to this."

This paper was read before the Laryngological Section of the Academy of Medicine, and one of the gentlemen present stated that he had seen the case before the writer of the paper, and had discovered a trickling of bright blood from a point in the region of the sphenoidal sinus, which returned after being wiped away. Cases were cited in which arterial hemorrhage had followed operations upon the sphenoidal sinus, but none where fatal arterial hemorrhage had occurred during the course of chronic disease in that locality.

PEARSALL.

**Merklen.—Laryngeal Vertigo.**—*Med. Week.*, iii, 1895.

The patient was a man thirty-nine years of age. There was no history of syphilis, alcoholism, hysteria, tabes, or any nervous disorder. He was accustomed to have, daily, two or three attacks, during which he would fall to the ground unconscious. These attacks were always preceded by a pricking sensation in the larynx and oppression of the chest, followed immediately by a spasmodic cough, choking, cyanosis, perspiration of the face, dimness of vision, and fall, usually with loss of consciousness. As soon as the fall occurred the symptoms ceased, and there were no unpleasant after-effects. "It was, therefore, a genuine case of laryngeal vertigo, the attacks of which, as in other cases of this kind, occurred principally after meals, but sometimes also during the night.

"To explain paroxysms of laryngeal vertigo, two theories have been propounded. According to some investigators, it is prin-

cipally due to a disturbance of the encephalic circulation, whereas others attribute it to reflex disturbances, the cause of which is hyper-excitability of the mucous membrane of the upper air passages, the stimulation being transmitted to the medullary centers, and determining sometimes simple spasmodic phenomena, at other time a genuine syncope, to which the fall is due."

These attacks are sometimes due to nasal obstruction, or other reflex irritation, and require surgical interference. The prognosis is always good, although the cure is sometimes prolonged.

PEARSALL.

**Eversbruch.—Extraction of Two Lenses Luxated into the Vitreous Body.**—*Munch. med. Wochensach.*, No. 51, 1895.

The author presents two cases successfully operated according to Knapp's method, and believes it to be superior to all others. He believes that the success of the operation depends upon the reattachment of the lens at intervals to the ciliary body by the zonular fibers. He has found the operation indicated in vacillating cataract, in very hard cataract, and in cases of luxation occurring during the extraction of an ordinary cataract. DEADY.

**Mandelstamm.—A Rare Case of Syphilitic Disease of the Orbit.**—*Centralbl. f. p. Augenheilk.*, October, 1895.

The patient was a man fifty-five years of age, who had contracted syphilis twenty years previously. He presented a double exophthalmos, accompanied by a chemosis of the lower portion of both conjunctivæ, the lower lid, and the cheek. The movements of the eyes were very limited. The trouble was of six weeks' duration. Basedow's disease might have been thought of, if there had been a goitre, or if the heart had not been perfectly normal. It was impossible to feel a retrobulbar tumor. The author, on the supposition that the affection was syphilitic in character, ordered mercurial frictions, but with no good results. On the contrary, the chemosis increased in spite of scarification, and even excision, the corneas ulcerated, a perforation appeared in the right eye, keratitis with hypopyon supervened, and the crystalline lens was spontaneously ejected. Thrombosis of the cervical sinus was suspected, and a still more energetic anti-specific treatment instituted. Injections of salicylate of mercury were given in doses of 0.1 gr. every other day, with iodide of potash internally, 2 gr.



daily. After the fourth injection the chemosis, as well as the exophthalmos, diminished and the left eye was saved. The author believes that the cause of the trouble was the appearance of specific cysts (gumma?) at the back of the orbit near the superior orbital fissure.

DEADY.

**Perles, Max.—Experimental Researches upon Infectious Diseases of the Eye.**—*Virchow's Arch.*, cxi. *Rev. gen. d'Ophthal.*, xv., 1.

In his experiments made upon rabbits, the author arrived at the following principal conclusions: The injection into the anterior chamber or the vitreous body of the bacillus of vegetable decomposition, of putrefying fish, of cholera, etc., does not produce any very marked ocular lesion further than occasional iritis with posterior synechia. Very virulent cultures of the typhoid bacillus introduced into the anterior chamber cause hypopyon and obliteration of the pupil, but the bacilli die in three days. Injected into the vitreous body, they produce an abscess, and the pus contains bacilli, either free or inclosed in leucocytes. Streptococci in the anterior chamber give rise to the formation of an exudate. Pus containing streptococci provokes a septic iritis in twenty-four hours. Injected into the vitreous body an abscess is formed. In the anterior chamber the Loeffler bacillus dies in a couple of days, after having produced a purulent exudate and a kerato-iritis. Friedlander's bacillus of pneumonia is one of the most dangerous enemies of the eye. Introduced in mild form into the vitreous body it sets up, within sixteen hours, an intense panophthalmitis with perforation of the ocular globe. The same result is obtained, although less rapidly, if the injection is made into the anterior chamber. If the cornea is inoculated, it gives birth to a characteristic ulceration, which becomes cicatrized. If the conjunctiva is intact there is no action. General infection has never been observed. On the contrary the pneumococcus of Fränkel-Weischselbaum produces rapid general infection, and the death of the subject. The author has obtained, however, by a culture upon eggs, an attenuated microbe which produces panophthalmitis without general infection. The pneumococcus is virulent only in the fresh state; on the other hand, the pneumobacillus may be preserved for months in agar or gelatine. The pneumobacillus is found in encapsulated masses in the pus of the conjunctiva, and often in the interior of the cells. If the cornea

is inoculated it is found in the lymphatic spaces. Introduced into the anterior chamber, it is discovered among the pus cells, and penetrates very quickly into the spaces of the ciliary processes. This bacillus multiplies rapidly in the vitreous body, and even penetrates into the retina, leaving intact, however, the layer of rods and cones, the pigment epithelium, the choroid and the vessels. As this bacillus is so frequently encountered in the mouth, and is especially common in ozena, it might be suspected of having an infectious action upon the eye. DEADY.

**Meyer, Willy.—Incision of Retro-pharyngeal Abscess According to Antiseptic Principles: From the Neck.—*Am. Med. Surg. Bull.*, April 4, 1896.**

After a short review of the somewhat unsatisfactory literature of the subject and a description of some of his own cases, the author concludes as follows :

1. In cases of impeded respiration, the differential diagnosis of the affections in question should be made as early as possible by gentle digital exploration of the patient's fauces.
2. If retro-pharyngeal abscess is present it should be evacuated by an incision from outside and not through the mouth, except in weak babies under one year, who seem to be unable to stand general narcosis.
3. This is of special importance in the tuberculous abscess, as digital exploration of the cavity can be made with leisure, and the proper antiseptic after-treatment applied as practiced in similar troubles in other localities of the body. Although this operation is especially designed for low-seated retro-pharyngeal abscesses, it can be successfully employed for those situated high up and even behind the uvula, as shown by my second case and the case of Kramer.
4. If a sharp, foreign body has been swallowed and has perforated the pharyngeal or esophageal wall, this body may be extracted with the help of this incision before an abscess has been caused, or at least before it has spread too far (Burckhardt).
5. The operation is not difficult and presents no special dangers. It should be performed with the patient in Rose's posture.
6. It has yet to be determined which incision deserves preference, whether that behind the sterno-cleido muscle (Chiene) or that in front of the same (Burckhardt).

PEARSALL.

**De Schweinitz, G. E.—Extraction of Immature Cataracts.**—*Ophthalmic Record*, June, 1896.

After referring to a series of twenty-five successful cases of extraction of immature cataracts by the simple operation, reported by Weeks at the Baltimore meeting of the American Medical Association, and also calling attention to the unsatisfactory results of attempts at artificial ripening of immature cataracts, he speaks of the technique of the operation, advocating the extraction with or preceded by iridectomy, and the opening of the capsule by the T-shaped incision. He does not favor irrigation of the anterior chamber for removal of cortical substance, and instills atropine immediately after the operation.

In twelve cases reported, iritis occurred in but one, in which there was trauma during the process of healing. Of these twelve cases, four were of the nuclear variety, six senile, one soft, and one traumatic. The ages of the patients ranged from twenty-seven to seventy-five years; one being twenty-seven; four, forty; three, fifty-eight; while the remaining cases were sixty-five, sixty-six, seventy-four, and seventy-five years of age respectively. The soft cataract was removed by simple extraction, the resultant vision being  $\frac{5}{8}$ . In five cases a preliminary iridectomy was performed. Discussion of secondary cataract was made in one-half of the cases; it being declined in two, and unnecessary in three, while one case yet remained to be operated.

Normal vision was obtained in two cases; one-half of normal in three cases; two-fifths of normal in two cases; one-fifth of normal in one case; one-sixth of normal in two cases; in which there was at least 11 D. of myopia, complicated with atrophic choroiditis; the patient could only count fingers in one case in which there was an atrophy of the optic nerve from chronic alcoholism; the remaining case had not been tested at the time of writing.

As a result of his experience the author prefers extraction of an underripe lens to artificial ripening. RITCHIE.

**MacIntyre, John.—Roentgen Rays in Laryngeal Surgery** (*Preliminary Note*).—*Jour. of Laryngol., etc.*, May, 1896.

The author's unfinished experiments with photography, by means of Roentgen rays and cryptoscopy, lead him to believe that the X rays will be much more useful to the laryngologist than was at first anticipated. For cryptoscopic purposes more



powerful apparatus is required, still in the end it must be more valuable than photography. Successful shadowgraphs of foreign bodies in the larynx and esophagus have been made, and apparatus is being prepared with which to view the maxillary antrum, etc.

PEARSALL.

**Sendziak, John.**—**Contribution to the Ætiology of Bleeding Tumors of the Septum.**—*Jour. of Laryngol.*, March, 1896.

The writer relates a case of a teacher, thirty-four years of age, who suffered from frequent and obstinate hemorrhages. At first slight, later very profuse. Complexion waxy, skin and mucous membrane pale. A growth about the size of a walnut was found in the right nostril—soft, and bleeding at the slightest touch. The tumor was attached to the inferior portion of the septum on a level with the middle turbinated body. The growth was removed in two sittings by the careful use of the galvano-cautery snare, with the result that the general state was improved and the bleeding stopped. A small polyp was found in the middle meatus, but was not removed owing to the exhaustion of the patient. Microscopical examination showed the growth to be an *angioma cavernosum sarcomatoides*, a very rare form.

The author considers the case notable : (1) Because it was a man. Lange, Schadowaldt, B. Fraenkel, Heymann, etc., observed cases of *angioma cavernosum* in women ; Scheier also in a man. (2) The growth was not situated on the anterior and inferior part of the cartilaginous septum, on the so-called locus Kiesselbachi, as generally occurs (Schadowaldt, etc.), but at the postero-superior part of the cartilaginous septum in the neighborhood of the osseous septum. Finally (3), there existed evidence of malignant sarcoma, with a benign (polypus) tumor of the nose, to which, among others, Kafemann (*Rev. Int. de Laryng.*, October, 1893) has drawn attention.

PEARSALL.

**De Schweinitz, G. E.**—**Repair of Cornea.—Scleral Wounds, with Prolapse of the Iris.**—*Ophthalmic Record*, June, 1896.

Non-operative measures are dismissed with but a mention, the author of the paper directing his attention to that class of cases in which surgical interference is indicated.

The first method considered is that of Gama Pinto, which con-

sists in abscission of the prolapsed iris, freeing of all adhesions to the margin of the ulcer, and the plugging of the opening with a flap of bulbar conjunctiva twice the size of the wound, which is pushed in by means of a blunt probe. Both eyes are then bandaged and left undisturbed until the third day, by which time the conjunctival flap will, in a majority of instances, be found to be adherent in the wound. The advantage claimed for this method is a flat, non-adherent cicatrix and a circular pupil.

De Schweinitz reports a case of extensive marginal ulceration involving the upper and outer segment of the cornea which was treated in this manner. Six years after, the seat of ulceration was occupied by a firm, white flat cicatrix, and the patient experienced no discomfort, but on the contrary was able to employ the eye for sewing, the entire day.

The second method consists in closing the wound with sutures. This method he supports by the history of four cases.

Concerning the class of cases to which the methods mentioned are applicable, he prefers that of Gama Pinto, in these in which the opening is distinctly circular, and also in those cases in which it is impossible to obtain non-infiltrated edges without destroying too much corneal tissue. The second method (stitching) is to be preferred in wounds and ulcers at or near the corneo-scleral junction, in which it is possible to secure perfectly healthy edges, and in cases in which the ciliary body has not been injured. He uses a very fine curved needle and a delicate silk suture, both of which are to be found in a Stevens tenotomy case.

RITCHIE.

**Collier, Mayo.—Ætiology of Nasal Obstruction.—**  
*Jour. of Laryngol., etc.*, March, 1896.

In reviewing the statistics relating to deviations of the nasal septum it appears that nine out of every ten civilized persons have some abnormality of the nasal cavities, while in four out of every five civilized beings the nasal cavities are normal. That nasal obstruction is seldom or never congenital, is common after puberty, and never after ten years.

In answering the question, Why is this so? the author points out the fact that the septum is a thin, translucent, elastic partition, designed to act as a delicate support for the mucous membrane and the delicate structure contained therein. It is not intended to give support to the bones of the face and skull, as is shown by

the fact that it may be partially or entirely absent without altering the external appearance of the face and head. The average area of the septum is nine square inches. If then one nostril is blocked up from any cause, such as temporary dilatation of the erectile tissues, paralysis or paresis of the dilators of the nose, injuries, inflammations, etc., the air rushing through the other nostril or through the mouth creates a more or less complete vacuum in the obstructed nostril; in the same way that a gentle breeze blowing over a chimney exhausts the air from a house. If a bent tube containing mercury (a manometer) be inserted in one nostril the mercury will fall about an inch while the air is passing in through the other nostril. That would be about half a pound to the square inch pressing inward upon all the structures about the nose. The septum, containing about nine square inches, would sustain a pressure of about four and one-half pounds. The effect on the face would be—pinched and approximated upper maxillary bones, high-arched palate and crowded teeth, lessened pharyngeal and post-nasal space due to pressure on soft palate. More damage is done during sleep than during consciousness. The abnormal growth of the bones of the face and head is shown by Liem's experiments in closing one nostril of young animals for a considerable length of time. If this explanation is true the thinnest and most easily displaced side of the nasal box—the septum—should be the most frequently affected; and, as a matter of fact, this is so. The author believes that the proper test of the permeability of a nostril is not the ability to blow out a lighted match or candle, but the ability to breathe through the affected nostril only, for a minute or two, without discomfort.

As sequelæ of chronic nasal obstruction the writer enumerates nearly every affection of the upper air passages, including the accessory sinuses and middle ear. Conditions due to syphilis, tuberculosis, and alcoholism are, however, omitted.

PEARSALL.

**Gillette, A. J.—Torticollis Due to Adenoid Vegetations and Chronic Hypertrophy of the Tonsils.—*Amer. Orthoped. Assoc.*, 1896.**

The author described three cases occurring in his practice, one of which was congenital. The child was relieved after removal of the vegetations and division of the sterno-mastoid. Another case was cured by the removal of the adenoid vegetations alone.

PEARSALL.



Valk, Francis.—Indications for Operating in Insufficiencies of the Ocular Muscles.—*Ophthalmic Record*, May, 1896.

The author discards the vertical diplopia test of Graefe, and the Maddox rod test, as creating a false condition by abolishing the normal guiding function of the retina to fuse similar images, and relies entirely upon the diplopia test with prisms, as employed to ascertain the relative power of the straight muscles. He lays particular stress upon the *relative* power of antagonistic sets of muscles, and decries any attempt to create an arbitrary standard of strength for any given muscle.

In testing the relative strength of the different sets of muscles, he invariably commences with the externi, placing prisms, bases in, before the eyes until the images can no longer be fused; the strongest prisms with which fusion can be effected, after several trials, indicating the power of the externi. The interni are next tested with prisms placed base out before the eyes, proceeding with great care and repeated tests, owing to the increase of power of these muscles under training. When, after tests repeated not oftener than every other day, the test registers no increase in the power of these muscles, we may conclude that we have reached its limit and so record it. Taking the power of the externi as one, the interni should show a strength two or three times as great; that is to say, the *relative* power of the externi should be to the power of the interni as one is to two or three; *e. g.*, if the power of the externi was measured by a prism of from  $6^{\circ}$ , the interni should be able to overcome a prism of 12 to  $20^{\circ}$ . He next measures the power of the superior recti, and lastly the inferior recti. In these tests the inferior muscle should show a greater power than the superior, as "the use and purposes of daily life require the eyeballs to turn downward much more than upward."

In operating for the relief of these conditions, he prefers to make all the correction possible at one sitting rather than to operate often, and in order to accomplish this, he divides his operations into three classes, each having a distinctive method.

First. Cases of slight insufficiency. He makes a small opening in the conjunctiva over the tendon of the muscle, close to its insertion, and exposing the tendon with a small hook, he cuts it at its attachment; "being careful to leave uncut a very small central portion, the size of a large thread." The conjunctiva is

then smoothed over the wound and a cold-water dressing is used; the eye not being bandaged, but left free for use.

Second. In cases of decided insufficiency which will not admit of correction by the preceding partial tenotomy, the tendinous insertion of the muscle is completely severed. The same after-treatment is employed.

Thirdly. This operation is essentially a modification of Savage's tendon shortening, although it was worked out independent of him. Valk makes a horizontal incision in the conjunctiva over the muscle. He then exposes the muscle by passing two strabismus hooks underneath the muscle and, by separating them, frees the under surface of the muscle as far as the necessity of the case demands. He then introduces a small curved needle, armed with No. 00 catgut suture, beneath the tendon, close to its insertion, and brings it out through the tendon a short distance from its lateral border; it is then reintroduced from below upward the same distance from its lateral border and as far back in the belly of the muscle as is necessary to secure the desired effect; now, introducing it from above downward at a point equally distant from the opposite border of the muscle, it is brought out below, thus forming a loop across the belly of the muscle; it is now caused to pierce the tendon of the muscle at its insertion, at a point opposite to the first point of entrance of the needle. A surgeon's knot is then tied and the suture cautiously tightened until the desired effect is obtained, when the final knot is tied and the conjunctiva smoothed over the wound. The suture is allowed to absorb and the small knuckle of muscle will gradually disappear, leaving, eventually, no trace of the operation.

RITCHIE.

**Kelly, Francis J.—To What Extent is Tonsillitis Contagious?—***Phila. Polyclin.*, February, 1896.

The author mentions a case where a child taken sick with tonsillitis gives the disease to four others, including the attending physician. The only member of the family who escaped was the father, who rarely came in contact with the children.

Bacteriological examination showed only streptococci and staphylococci. It would seem to the writer that these cases were more than coincidences, and should serve to emphasize the necessity of guarding healthy children from contact with those suffering from this disease.

PEARSALL.

**Lemoine, G.—A Bacteriological Study of the Throat in One Hundred and Seventeen Cases of Scarlet Fever.**—*Bull. Med.*, 1896.

The author concludes that the streptococcus is the only micro-organism that is constantly present in scarlet fever, and that the early throat lesions of this disease are of streptococcic origin and do not appear to differ in any way from those of other pharyngeal inflammations. There may be and sometimes is a double infection of streptococcus and the Loeffler bacillus from the earliest stage which makes the case one of greatest gravity. The presence of bacillus colli is, in some cases, as serious as that of the bacillus of diphtheria.

PEARSALL.

**Travis, B. F.—Sudden Blindness with complete Recovery.**—*Ophthalmic Record*, April, 1896.—The patient, a frescoer, was suddenly seized with blindness while at work. When seen by the author, he stated that he had experienced no pain either in the eyes or head, but that the vision had been gradually failing in the left eye during the past month, but that the right eye was perfectly good up to the moment he went blind. There was no perception of light. The pupil (right) was contracted, although it showed some reaction to light. A one per cent. solution of atropine sulphate was instilled and ophthalmoscopic examination revealed nothing abnormal except that both the arteries and veins seemed contracted. Hypodermic injections of pilocarpine were resorted to. The following day the retina presented a milky appearance, while the vessels were, if anything, a trifle lessened in caliber. The next day he was put on iodide of potash.

On the third day after the onset of the attack vision commenced to return, accompanied by excruciating deep-seated pain in the eyes; which was controlled by hypodermics of morphia.

On the following day (the fourth after the attack) his vision was O. D.  $\frac{2}{3}$ , O. S. shadows. The next day his vision had increased to  $\frac{2}{2}$  in the right, and  $\frac{2}{10}$  in the left. Retina and vessels normal. The vision remained the same up to the time of writing. Savage, who saw the case, attributes the condition to arterial spasm.

RITCHIE.

**Ebstein, Ludwig.—The Effect of Salicylic Acid upon the Mucous Membrane of the Respiratory Tract.**—*Wiener klin. Wochenschr.*, No. 11, 1896.

The writer describes the effect of the drug upon a worker in



salicylic acid who was sixty years of age. For two years he had suffered from a persistent day cough. Expectoration thick, grayish, and very scanty. Later, severe attacks of dyspnœa appeared which, during the night, were very similar to asthma. The mucous membrane of the nasal cavities, the pharynx, larynx, and trachea were thickened, injected, and covered with a grayish, tenacious false membrane sufficient in quantity to produce partial stenosis. Examination of the chest revealed some slight emphysema and a dry bronchitis. The condition was completely relieved by the administration of iodide of potash, which diminished the swelling and removed the membrane, leaving a clean grayish-red surface. The whole condition reappeared upon the patient's return to his work, and was far worse when the amorphous powder was used.

The author concludes that salicylic acid acts as an irritant to mucous membranes, especially of the respiratory tract. The inhalation of suspended particles produces a scratching, burning, tingling sensation in the throat which causes a violent and prolonged spasmodic cough. The diluted vapor produces the same condition. The application of the pure crystals produces an eschar which lasts for several hours. PEARSALL.

**Garel.—A Form of Pharyngitis Permitting the Recognition of Diabetes or Albuminuria.**—*Ann. d. Mal. de l'Oreille*, xxi., 1895.

The writer gives a very careful and minute description of certain throat symptoms which he considers indicative of the above diseases. All of the symptoms given are frequently met with in a variety of throat troubles, and the paper would seem to make its strongest point in emphasizing the necessity of an examination of the urine in obstinate cases of throat disease. PEARSALL.

**Koplik, Henry.—Retro-pharyngeal Abscess of Infancy and Childhood.**—*Am. Med. Surg. Bull.*, April 4, 1896.

The paper is founded upon an experience derived from seventy-six cases of the disease in question. The symptoms appear more rapidly, and with greater evidence of suffering, in children owing to the shorter pharyngeal space. If all of the retro-pharyngeal lymph-nodes are involved there will be swelling in the mouth and

sometimes between the angle of the jaw in front of the sterno-cleido-mastoid.

In the acute abscesses, a bacteriological examination showed four distinct varieties of streptococci, all of which were found, upon trial, to be non-septic in character.

In the seventy-six cases under consideration, the majority occurred between the ages of six and twelve months, only one being as old as nine years. The only accurate method of diagnosis is by digital examination, which, if not carefully performed, is not free from danger and may be followed by extreme prostration. Rupture of the abscess may occur during a rough examination, which is unfortunate, since the pus is apt to flow into the larynx.

The author emphasizes the fact that the danger of *not* incising these abscesses is much exaggerated. If left to nature the point of rupture is usually small and the escape of pus slow, thus diminishing the danger of its entrance into the larynx. At the same time this let-alone treatment is not to be advised.

From the fact that seventy per cent. of his cases occurred in infants with few, if any, teeth, the writer believes that antisepsis is not as imperative as in adults. In the majority of his cases the abscess pointed in the median line of the pharynx, and here the internal incision gave most excellent results. If, however, the abscess is at one side of the neck or has a tendency to burrow, or occurs in an adult, the external incision is to be preferred.

PEARSALL.

**Burnett, Swan M.—Formalin in Ophthalmic Practice.**—*Ophthalmic Record*, March, 1896.—As a therapeutic agent he considers formalin of great value in cases calling for a germicide; possessing advantages over other drugs of this class in that it is non-toxic, has the power of rapidly diffusing itself not only through dead, but living tissue as well. In this latter respect it differs from the sublimate solution, as it does not coagulate the albumin near the surface; which condition not only forms a barrier to the further deeper penetration of the microbicidal agent, but even constitutes a favorable soil for the development of the germs.

He has had excellent results from watery solutions of 1-1000 to 1-2000 as an antiseptic collyrium for general use. Corneal ulcers are to be touched once daily with a solution of 1-200 or 1-500, in addition to the use of the preceding. He

occasionally uses it in the strength of 1-100 to cauterize corneal ulcers, and in one case of serpiginous ulceration, treated in this manner, the results were much more satisfactory than under the usual treatment employed.

In catarrhal conjunctivitis, and mild forms of the purulent variety, his experience with it has been most satisfactory. Acute catarrhal conjunctivitis yields readily to a collyrium of the strength first mentioned, applied every four hours. Results have been satisfactory, also, in the chronic form with diminished secretion, which frequently proves intractable to treatment. In the purulent form he uses it in addition to the nitrate of silver.

In ulceration of the lids he uses it in solutions varying from 1-100, to 1-2000, according as he desires to obtain the action of a mild caustic or a stimulant. It has been of especial service in indolent ulcers with hard edges simulating epithelioma.

As a means of disinfecting instruments and rendering them aseptic, it has the advantage of not dulling the edges of the knives.

For flushing out the eye previous to operation, it gives rise to some discomfort if used in solutions of greater strength than 1-2000.

RITCHIE.

**Laurens.—Anæsthesia with Guaiacolized Oil.**—*Ann. d. Mal. de l'Orielle*, xxii, 1896.

The writer used a five per cent. solution of guaiacol in pure olive oil and found that it possessed marked anæsthetic properties when applied to the mucous membrane of the nose, throat, or ear. The part which he wishes to anæsthetize is rubbed briskly with a cotton-tipped probe dipped in the solution. Sensation becomes lost in from fifteen to twenty minutes, when minor operations may be performed without pain.

PEARSALL.

**Sicar, M. L.**—*Calcutta Journal of Medicine*.—In April last, when I was at Haidyanath Junction on the East Indian Railway (Chord Line), Babulal, a servant of mine, complained of Night-blindness. The blindness used to set in as soon as the sun set, and would continue till day-dawn, when he could see again. There was no pain in the eye, nor any visible change in it. There was no other complaint. I could not trace it to any cause, except that after his morning work he used to go for his meals to his village, about a couple of miles from where I was living, at about noon, and



come back to his duty a couple of hours after, so that he had to expose himself to the heat and glare of a powerful sun. I prescribed *nux vomica*, and gave him pilules moistened with the 6th dilution. The improvement reported on the following day was not satisfactory. I thought this was due to the small size of the dose, and I, therefore, gave him drop doses of the same dilution. The improvement was rapid and remarkable, and in a couple of days he was all right. There was a slight relapse in June next, and the same remedy, in the same dilution and dose, was efficacious as before.

---

## BOOK REVIEW.

DISEASES OF THE EAR. A Text-book for Practitioners and Students of Medicine. By EDW. BRADFORD DENCH, Ph. B., M. D., Professor of Diseases of the Ear in the Bellevue Hospital Medical College ; Aural Surgeon, New York Eye and Ear Infirmary, etc., etc. With eight colored plates and 152 illustrations in the text. D. Appleton & Co., New York, 1895.

The perusal of this book impresses the reader with at least two facts ; the first, that the author is a man who is very 'thorough in his methods ; the second, that much of what he has written is the result of personal experience as differentiated from book knowledge.

He has provided for his work a broad foundation, in the fact that the reader is first shown how to make a diagnosis, in two chapters on physical and functional examination of the ear, which are the best, the most complete, and most modern, of anything which has appeared in a work of this character.

This portion of the book is very far from being the ordinary routine description of the methods of examination.

It is carefully written, and the various procedures are described so clearly as to be easily understood by the novice in otology, without detracting from its value to the more expert practitioner. Throughout the work the style of the author is exceedingly easy and readable, conveying much information in comparatively little space.

The surgery of the conducting apparatus is considered at some length ; the author is an advocate of the various operative procedures upon the middle ear, and his descriptions of those manipu-

lations are not the least valuable of his contributions, if only for the reason given in the preface, that his faith in these methods is founded upon a successful personal experience. There is little doubt that the judicious use of these operations in selected cases will eventually justify their supporters. An excellent description of the mastoid operation is presented, the author being favorable to very thorough work, and claiming that with reasonable care and under proper precautions, the dangers of even the most radical measures are very far from being serious.

This portion of the book is exceedingly interesting. A chapter is also devoted to the surgical treatment of intra-cranial complications, in which the landmarks and technique of the exploration of the different cerebral regions are well set forth.

The work is excellent throughout. Especial attention should be called to the plates interspersed throughout the text. Many of them are original with the author and these are particularly fine.

The press-work, binding, and paper are first class, and the volume is a credit to the author and the publishers.

---

#### PERSONAL.

Dr. E. G. Rush has removed from Wellington, O., to Cleveland, O.

# THE JOURNAL OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

---

EDITOR.

CHARLES DEADY, M. D.

ASSOCIATE EDITORS.

F. G. RITCHIE, M. D.

CHARLES E. TEETS, M. D.

WM. S. PEARSALL, Ph. B., M. D.

---

## ON THE ELECTRO-VIBRATION OF THE TUR- BINATED TISSUE.

BY J. MOUNT BLEYER, M. D., F. R. A. M. S., NEW YORK  
CITY.

IN this paper I shall attempt to present the useful purpose that faradism has served me in treating this form of disease involving certain conditions of the turbinated tissue, which from time to time we have been in the habit of treating according to the prevailing fashion of the moment; now medically, then again by the more radical means of surgery, the cautery, the saw, the snare; involving a tissue destruction to which, in some instances, I have been for a long time opposed, and which I availed myself of in the hope that some day I would hit upon a better plan of procedure; more physiological, and less often accompanied by results ranging from beneficial to positively bad, if not, to say the least, lastingly harmful. I believe, from the results of two hundred cases treated by the method as I shall describe it, without going into the details of each individual case, I have found a remedy for the treatment of simple hypertrophied turbinated tissue that is far better than either the medication treatment or surgery, or both combined. *It is "faradic vibration."*

Whatever prejudices the practitioner in general, or trained specialist, may have to the use of electricity in the



healing art, let me ask you to fling them aside until you have tried this method. It is not only the specialist who can utilize faradic vibration, but the general practitioner has it within his power to apply treatment to cases which hitherto have baffled his best energies and fallen into the hands of the specialist. In short, I plead for a fair, impartial trial. The time has come when those of us who have given years to the careful study of the curative usefulness of electricity must plead for tolerance among our colleagues, and an impartial hearing. Electricity has many uses, and I am sorry to say many abuses, which in no few instances come from so-called specialists, ranking high as leaders in the slowly growing science of electro-therapeutics. As in all new movements that are alluring and promising we must wade through them and outlive the charlatans, who are always on the alert to take advantage of the intimations worked by thankful investigators, and who proclaim the birth of the chick long before the egg is laid. These men are the slaves who follow the victorious army, and who by unjust usurpations, with no object save personal aggrandizement, style themselves leaders; frown down honest thinkers, men who feel it a duty to record their failures with the same even spirit in which they make known their successes, in the hope that the kernel may be sifted from the chaff, and finally succeed, as one can readily suppose, in throwing the science into disrepute just as the quack does his nostrum, which may be good for something, but turns out good for nothing, simply because he uses it as a panacea for all ills. Copaiba in emphysema is a good remedy in bad company. The same may be said of electricity; it is a good remedy, which unfortunately has fallen into the hands of men who have ceased to be, if they ever were, diagnosticians, physiologists, physicists, and who simply are electro-therapeutists, precisely as are other dishonest practitioners calomelapeutists and ipecaceapeutists. Electricity has still to pass through its era proclaimed. It is therefore that I ask for an impartial hearing. I beg of you to restrain the rising claim that this is electrical rot until I have had my say.

The good account faradism has rendered of itself in this instance is due to the fact that I unhesitatingly say that we have studied and carefully observed its physiological action, and have just begun to bring it under the control to which all remedies are subject, that of intelligent dosage. This has been rendered possible by the recent improvement in faradic machinery, the results of the combined ideas of many who have worked toward that end; but with all we are far from the ideal of perfection, which might be attained the sooner if the general profession gave us support and encouragement instead of continual censure and criticism. These criticisms are undoubtedly due to the fact that a large per cent. of medical men are ignorant of the first principles of the physics, and therefore cannot understand the physiological or any other action that electricity has upon the human economy. For this reason many squabbles are continually occurring, and will do so until we educate the physician up to the standard necessary for him to comprehend the very principles of electricity. I simply make these remarks, so that I may be rightly understood and not classed among those who quack it through instead of using this most valuable of remedies with intelligence. By means of induced currents (faradic electricity or interrupted current) very powerful currents can be obtained, but currents which only last a short period of time. If we wish to apply the induced currents therapeutically or for experimental purposes, we must find means of generating them in quick succession. An apparatus for this use is called an induction apparatus or a faradic battery. To be more explicit: the essential parts of an induced-current machine are spirals with iron cores, which are moved quickly past powerful magnetic poles. An ordinary faradic apparatus would then consist of a primary coil having an iron core, and a secondary coil which is wound over this primary coil. Through the primary coil a galvanic current is passed, the make and break of which follow rapidly upon each other. This make and break in order to produce this phenomenon, which is necessary for the rapid inter-

ruptions of the current in the primary coil, an automatic circuit-breaker is provided. This may be simply a vibrating armature of an electromagnet, alternately energized and de-energized, which armature in vibrating alternately makes and breaks the primary circuit. Such arrangements are usually found in small induction coils.

The three illustrations below inserted explain the principal points regarding the construction and physics of an induction machine.

Fig. 1. Illustrates a galvanic current which sweeps around the primary coil  $C'$ , which ( $\alpha$ ) converts the core into a mag-

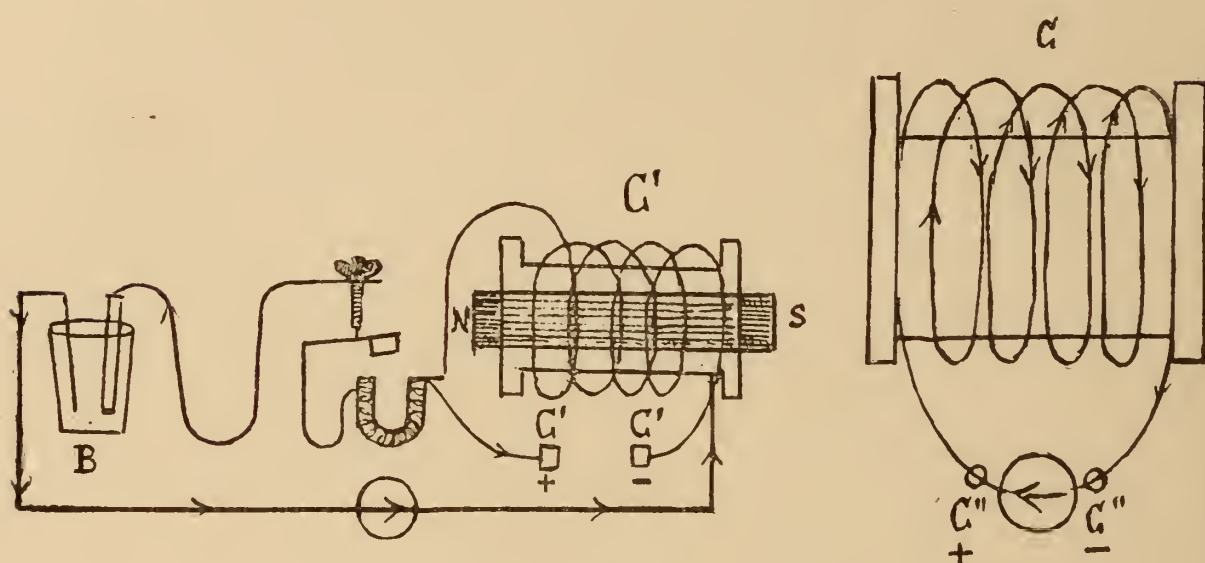


FIG. 1.

net N. S. and ( $b$ ) induces a momentary reverse current in the secondary coil  $C''$ . 2. The sudden magnetizing of the core itself induces a reverse current in the secondary coil, which strengthens the galvanic induced current, within this circuit. 3. The magnetized core attracts the soft iron head of the spring to itself, and so breaks the current flow. 4. This stopping of the current flow stops the magnetizing influence upon the core, and a direct current is induced in the secondary coil by the breaking of the primary current, strengthened by that induced by the demagnetization of the core. 5. The magnetic force holding the hammer being removed, it returns by another current, passes, and



by these vibrations the process is repeated in such rapidity as the strength of spring and magnet admits.

*Definition of Induction.*—*What is Induction? What are induction coils?* By common consent this term is employed as a name for an apparatus invented by Musson & Neef, and subsequently by M. Ruhmkorff, consisting of a bobbin wound with a short coil of stout wire, over which is wound a secondary coil of very fine wire of many thousand turns, well insulated from each other, the whole fitted with a central core of iron. The name is not happily chosen. It should have been inductive coils, since the word inductive means leading, persuasive, productive, and the use of these coils is to produce a high-tension electric current from one having a low tension. The term inducing coils would have been still more correct, since inducing is part of the verb induce, a word meaning “to influence; to persuade; to actuate; to impel; to allure.” The appropriateness of those terms to the electrical instrument under consideration will be seen, as we proceed in explaining the principle, construction, and their mode of action. The word “induction,” on the other hand comes from the verb “induct,” which means “to introduce; to bring in; to put in possession,” none of which apply appropriately to the action of the inducing or inductive coil. Scientists have given different definitions for the term “induction,” but most of them are not clearly defined. Perhaps it will be more easily understood if put in the following words: Induction is the name given to the attracting or repelling influence exerted by a current of electricity on all material lying in and near to its path.

*Theory of Induction.*—Early theories respecting induction were based on the assumption that there existed two electricities, one positive, and the other negative, both of which were fluids. The fluid theory has been abandoned by electricians, because modern observation of electrical effects has rendered the theory no longer tenable. The other theory of two electricities, that is, two kinds of the same thing,

such as positive and negative, answering to the terms male and female, is also fast passing away, although we still speak and write of electricity as being positive and negative, but we use these terms more to distinguish the backward and forward movement of the current than to assume the existence of two separate and different forms of energy. Some of the newest theories respecting induced currents of electricity are based on the assumption that all bodies are enveloped in a fluid, to which the name of ether has been given. The electric current in passing through a conductor disturbs the arrangement of its component parts, and these in turn are said to disturb the ether, which then transmits the disturbance to contiguous bodies. Whether this theory is based on fact or on fancy, we cannot here determine, but the fact remains that there is such a disturbance set up in bodies near to electric conductors, and these are especially observable at the instant when the current of electricity is interrupted, as when the electric circuit is broken. The observed effects go to show that the interruption causes a kind of eddy or back wash in the current, which is felt by other bodies susceptible to its influence, and observed in them as a current flowing in an opposite direction to that of the inducing current. The inducing effects are more strongly shown in conductors actually in contact with the insulating substance; but they are also observed in conductors separated by air space only from the inducing conductor. This goes to show that either the air or some similar invisible conducting medium transmits the inducing effects of one conductor to another conductor.

*Principles of Induction.*—Before we proceed further in the study of induction or of inductivity, it will be advisable to notice a few of the principal facts, or laws, governing its action. These, when well understood, will guide us regarding the construction of coils for the faradic machine, or induced-current apparatus.

The inducing conductor and the conductor to be induced must run parallel, side by side. The inductive effect is weakened when they cross each other, and may be neu-

tralized by a transverse position. The bare conductors must not touch each other, but must be separated by an insulating medium, or so-called non-conductor of electricity. If two conductors are in contact at any part of the circuit or are insufficiently insulated, they combine in forming one conductor, the primary current in one direction only; and consequently there will be little or no inductive effects observed. The insulating medium should be as thin, and yet as perfect as can be obtained. The turns of the conducting wires of a coil should not only be wound regularly side by side to get the best effect, but should also lie close to each other, separated only by the thin insulating medium, since each turn exerts an inductive influence on its neighbor, and this influence is weakened by overinsulation and want of contiguity. It will be seen further on, when we consider the relative values of insulating mediums, that the best of these are conductors of electricity when the tension or pressure of the current is sufficiently high to overcome their resistance. Therefore, in planning the insulation of the wires and other parts of a coil, regard must be had to the tension of the current employed in working it, for if we employ a current of higher tension on an imperfectly insulated or badly arranged coil, with a view to obtaining better effects from it, the extra current forced through the coil will overcome the resistance of the insulation and break it down. Whenever this occurs in a coil the inductive effect ceases, because all the compactly insulated turns of wire unite to form one large conductor, in which the inductive effects of the well-insulated turns are absorbed.

The inductive effects of a current are observed in at least three manifestations: (1) When the insulated conductor is wound as a wire around a mass of soft non-magnetic iron, the current of electricity passing through this conductor induces magnetism in the iron and converts it into a magnet while the current is passing. The effect here manifested as magnetism only exists while the current is passing through the conductor, and ceases when the current is broken.



(2) When the insulated conductor is doubled on itself, or wound into a spiral, or made into a coil with or without a core of soft iron, the inductive effect of one turn of wire on another is manifested at the terminals of the battery or other generator of electricity, when the circuit is broken, by a bright spark, which increases in brightness with the number of turns made by the wire. A similar spark is observable at the terminals of a wire wound or laid parallel to the conductor in the main circuit, when the necessary conditions are present. This effect is only observed at the instant of breaking contact with the battery, or, in other words, on the instant of the rupture of the main-circuit wire.

(3) When a wire is thus made into a long spiral with several coils close to each other, and the bared metal parts near the battery terminals are held in the naked and moist hands of a person, that person will experience a tingling sensation in the nerves of the finger at the instant when the contact is broken, and also when the contact is made again with the battery. This manifestation of induction is also only momentary, but can be repeated as often as contact is made or broken. When a long coil of fine wire is wound on and over the main coil the tingling sensation can be felt at the terminals of the second coil when contact is made or broken at the terminals of the first coil.

There are, therefore, three distinct manifestations of electricity current induction, or the induction effect of the electric current observable, viz.: the magnetic, the calorific, and the physiological.

All these three effects can be found described, and its experiments shown in detail, in all works on physics. I therefore find it useless to dilate on that part of the subject, and take up the more important facts: the physiological action of the induced current, in general and special, on the turbinated tissue.

*Some of the Physiological Actions of Induced Currents.*—The duration of induced currents has marked influence upon their physiological effects. The constant current of

a battery only affects our system when a great many elements are used, and the weaker constant current only affects very sensitive parts; our nervous system, however, is very sensitive to rapid electrical changes. The induction current, therefore, produces far more powerful shocks than the primary current, because the duration of the former is far shorter than the duration of the latter. The difference of duration in induced currents, when massive iron cores or bundles of wire are introduced in the coil, explains the marked difference in their physiological effects. By introducing solid matter, the duration of the induced current is increased; by introducing a bundle consisting of many fine wires the duration of the induced current is lessened; therefore, the physiological effect is far more powerful. This has been proved to us by Magnus, and beyond a doubt bears important relation to the action of such an induced current in its physiological action. The effects which are produced in general in any case under treatment by electricity are *stimulating*, and tonic effects general and local. These belong to both galvanism and faradism, but especially to the latter, which acts as a stimulus, partly upon the contractile tissues, both directly and through their motor nerves, partly by its sensory nerves, and partly in a reflex manner through the vasomotor system; producing increased vascular activity in the parts which it reaches. These effects are to a certain extent shared by other modes of stimulation, as for instance by massage, by treatment and hot and cold douches, followed by friction with rough towels, and so forth; but electricity has certain advantages over these other modes of stimulation, especially in all paralytic affections from its greater power of inducing, and by its vibratory and stimulating action upon the nerve filament for quite a distance of their length and tissue contraction, and from the ease with which it can be directed to any required parts or cavities in the body. The effects which peripheral stimulation exerts upon the central organs play an important part in electrical treatment, and afford the best explanation of the benefits which follow even in cases

where the treatment has been applied to the peripheral parts only. The direct effect upon the sentient nerves by the induced current. The healthy sentient nerves are observed by the aid of the microscope to be arranged in their peripheral terminations much like fine moss, or the pile of fine uncut silk velvet. If this vibratory action of the induced current is brought to bear upon these nerves in the nose, the sensation received by the membrane during the passage of the current is as if painfully scratched. The induced current in a given bearable quantity and intensity has a greater effect upon the sentient nerves, in proportion to the frequency of the interruptions of the current, *up to a certain degree*, which, for instance, may be about all the nerves can bear; but if the vibrator or any machine is screwed up a trifle so as to make the interruption extremely fine and rapid, then the current is more easily borne, and not only so, but it then becomes almost or quite pleasant.

But I am of the belief there is in this case more indirect effect—*i. e.*, *reflex action*—because this current more nearly resembles the continuous galvanic current. A pretty rapidly interrupted current has more effect on the sentient nerves than very slowly interrupted currents, because *it is the law of their action to feel or retain the effects of an impression for some little but appreciable time after being acted upon*. So where a sentient nerve that is in health is subjected to the action of a single blow of an induction current, if of low tension, there is almost no sensation; but if these blows or shocks are then *repeated* faster and faster, the sensations will likewise increase, because the sentient nerve is not now in its normal state—*i. e.*, when it receives the second, and third, and succeeding shocks—but is in an excited condition, or polarized. Thus it is easy to understand why the sensations produced by the induction current increase in proportion to the velocity of the interruptions, to a certain degree.

Since the construction of the first induction machine or faradic battery by Musson and Breguet many patterns have



evolved from it—with more or less additional improvements. For the treatment of simple hypertrophic turbinated tissue a good faradic battery is the first prime consideration in order to succeed. There are numerous fine machines on the market which will suffice for the purpose, but I wish to bring to notice a pattern of one which, to my mind and experience with the same, is the archetype of all others, because it embodies all the true principles of a model faradic machine. The invention is of Dr. George J. Engelmann of St. Louis, and another type of my own. The characteristic features of this apparatus, which give to the current its controllability and extended range, are: “1. The use of two motive powers, the separation of the primary flow through the coil from that which propels the interrupter—in other words, a separation of the forces which serve to produce the interruption, and the current proper, with smoothness of current, admits of perfect regulation and control of each, independent of the other. 2. The interrupter, which is characterized by rapidity and controllability; (*a*) it admits of greater rapidity of interruptions than hitherto known, thus extending the physiologic and therapeutic efficiency of the current, and (*b*) the control of these interruptions is perfect, making record and comparison possible. 3. The series of secondary coils, varying in the number of winds and the thickness of the wire used, each of known physical and physiological power, adapted to its special therapeutic purpose, for reduction and stimulation, for effects on nerve or muscle.”

There is no doubt that the rate of vibration is one of the most important factors in determining the therapeutic effect of the induction current, and not merely as it was formerly treated, a mechanical necessity for the production of such currents, and very secondary part in the apparatus, as it has always been, and still is, in all faradic instruments. However, regularity of vibration or interruption is essential to a serviceable therapeutic current, and to obtain this, we not only have an interrupter acting with far greater

regularity than the old-time vibrator as ordinarily constructed, but, in addition, the vibrator must be controlled by a separate force, entirely distinct from the coil current, as it is in this apparatus.

The therapeutic importance of vibration or alternations on which Dr. Engelmann and myself lay so much stress became also an accepted fact through two scientists, Mr. Nicola Tesla and D'Arsonval. The former having demonstrated the marvelous mechanical results of rapid vibration, and the latter having proven the surprising in-

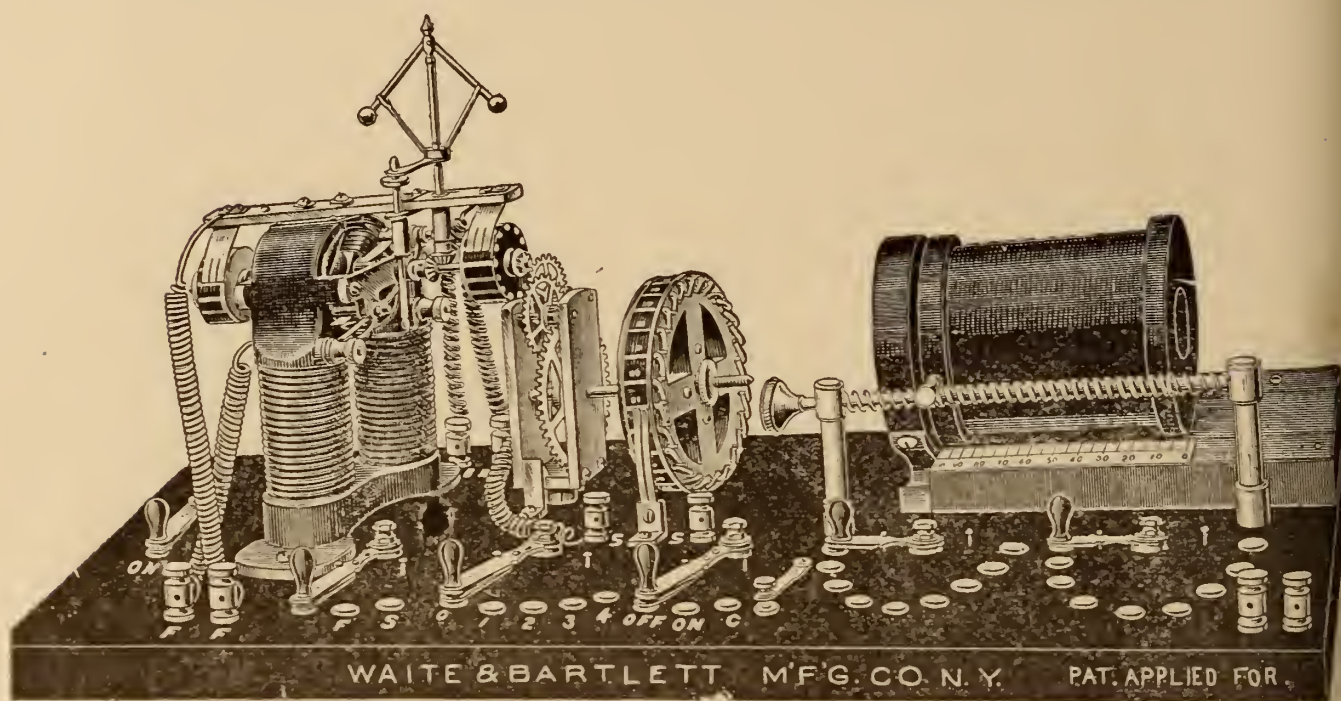


FIG. 2.

sensibility of the system to currents of extremely rapid alternations. The remarkable results of vibratory action have been sufficiently demonstrated of late, and the varying effects of such vibrations of various mediums upon different nerves are the subject of physiological and therapeutic experiment. The more varying the effect of different rates of vibration the more important is their perfect control.

The increased rapidity of interruption and the ability to control it give a wide scope to the efficiency of the current, increase its sedative powers, and render the application of effective currents possible to the most sensitive tis-



sue—certain results, especially decided vasomotor effects, being produced by rapid interrupted currents, which are no longer perceptible to the sensory nerves.

Dr. Engelmann says: "Whatever be the theory of these rapid interruptions—whether it be true or not that the effect of the faradic current is mainly due to its mechanical influence upon the molecular constitution of the organism—the facts are that this variability, which is the very life and essence of faradic electricity, is likewise one of the most essential factors in determining its therapeutic efficiency. This is readily proven by observing the physiologic effects of the lower rates of vibrations, the highest obtainable by the spring vibrator \*—one best demonstrated by the use of mild currents; but, as such currents would cease to impress the sensory nerves, and would no longer be recognized by them if interrupted with greater rapidity, stronger currents must be used to test interruptions of greater rapidity."

Dr. Engelmann has placed in our hands a new appliance, capable of giving us high rates of interruptions, together with a perfect control of those interruptions. Vibrations from one to one hundred thousand per minute are obtainable. I am also of the same belief with Dr. Engelmann that fifty thousand interruptions to the minute are ample for all therapeutic uses, in connection with the primary and secondary coils, as now used in practice. By this mode of rapid

\* "Great vagueness exists as to the rate of vibration of the average vibrator, and as a rule this is overestimated. An ordinary spring may vibrate 2-3000 times per minute, 40 to 50 per second, and a better instrument at most from 4-6000 per minute, or from 60 to 100 per second; to determine this with precision by a tuning-fork is possible, but a difficult task for any but the skilled experimenter; the simple determination by the comparison of the note sounded is uncertain and subject to a most variable individual equation as well as other sources of error. My assertions are based on my own older Gaiffe instrument, which does not exceed 3-600, and on the comparison of results from the Waite & Bartlett spring vibrator with those from the controllable interrupter current. Moreover, at the suggestion and personal experimentation of Dr. J. Mount Bleyer of New York, the lycopodium figures obtained upon the tense membrane by the vibrator and known rates of the new Engelmann interrupter have been used as means of comparison, and by reference to the results obtained by these three methods the rates of vibrations have been determined with approximate certainty."



interruption a most valuable means is given us—we can employ strong efficient currents without discomfort—and is found in the nerve-quieting, sedative-effects of these interruptions with fine-coil currents.\*

*Electro-Vibratory Massage* is the art of applying an intermittent, induced, or interrupted current (faradic electricity) with a specified amount of makes and breaks, periods or interruptions, by means of an electrode, directly to the hypertrophic turbinated tissue within the nasal cavity, or other parts to be treated by this method. As a contrast to electro-vibratory massage usually spoken of, is the act of applying intermittent pressure and strain to the muscles and other accessible tissues. The means employed are rubbing, kneading, and light pounding, combined ordinarily with more or less additional stimulation of the skin—as by friction and slapping. This manipulation furthers the removal of lymph from the parts, which is especially needful when the lymphatic flow is sluggish through lack of muscular exercise. It apparently quickens the blood circulation through the part, and furnishes gentle vasomotor exercise; it acts possibly as a direct trophic stimulus to muscular and sustentacular tissues; by stretching ligamentous structures it maintains or increases suppleness; in the abdomen it stimulates and aids peristalsis, and as a general stimulation of sensory nerves it may affect favorably the nutrition of the central nervous system.

In the foregoing part of this paper, under the heading of the physiological actions of the induced current, I have rehearsed in detail its effects and its therapeutic value. It has been demonstrated to me in all cases that electro-vibratory massage acts directly on the part undergoing the vibration. It influences the circulation in the veins and lymphatics, and at the same time acts as an anæsthetic where congestions are present, as in acute and chronic

\* A description of the Englemann machine is found in the catalogue of Waite & Bartlett of New York City. The picture above shows the faradic apparatus in full operation.

inflammations, which will at once make itself evident to the operator. The gross physiological action, by applying these high-rate vibrations to the turbinated tissues, is simply hastening the absorption of the inflammatory processes and thereby reducing the size of these bodies which occlude the meatuses.

This system I have been practicing for ten months, and have applied it in over two hundred cases. I can only say that results are most satisfactory to myself and to my patients. A very important effect is noticed by the patient immediately after the first séance—that the turbinated bodies have been reduced and breathing is possible through the meatus which, previous to the application, was occluded. The secretions are more abundant, and the entire head has a feeling of clearness, which is due to the reduction of the tissue, emptying of blood vessels and lymphatics, and the effects of an impression left by the high-speed interrupted current on the sentient nerves, for some little but appreciable time after being acted upon. Different sensations are felt by different individuals, as pinching, pricking, and—most often experienced—a burning sensation, as above described. These are most of the physiological and clinical facts connected with electro-vibration of these tissues, which I have tried to describe as graphically as possible.

*The Practical Procedure of Electro-Vibrating these Tissues.*—For example let us take a hypertrophic inferior turbinated body of the left side of a patient to be operated on. The physician must be ready with a proper plant, viz., a first-class induction machine, capable of giving no less than from four to six thousand interruptions per minute. I generally use from ten thousand to fifteen thousand, produced by Engelmann interrupter electrodes of different diameters and curves. These are the chief instruments for properly carrying out this form of massage. The patient is seated before a reflecting mirror, with the head in a comfortable position. A speculum must be used in order to apply the electrode over the body or tissue to be treated. When the electrode is once placed over the

hypertrophic turbinated body, the current is slowly graduated in strength with the high speed of interruption at once. Allow the electrode to remain in one position over the tissue treated, for the entire séance. Don't reintroduce the electrode without stopping your current, or your patient will receive a shock, which is to be avoided. But start as you began, by turning on the graduated or tolerant current with its high-speed frequency. Each sitting is to last from twelve to fifteen minutes if repeated daily, for the first week, and every other day after that. If the patient is

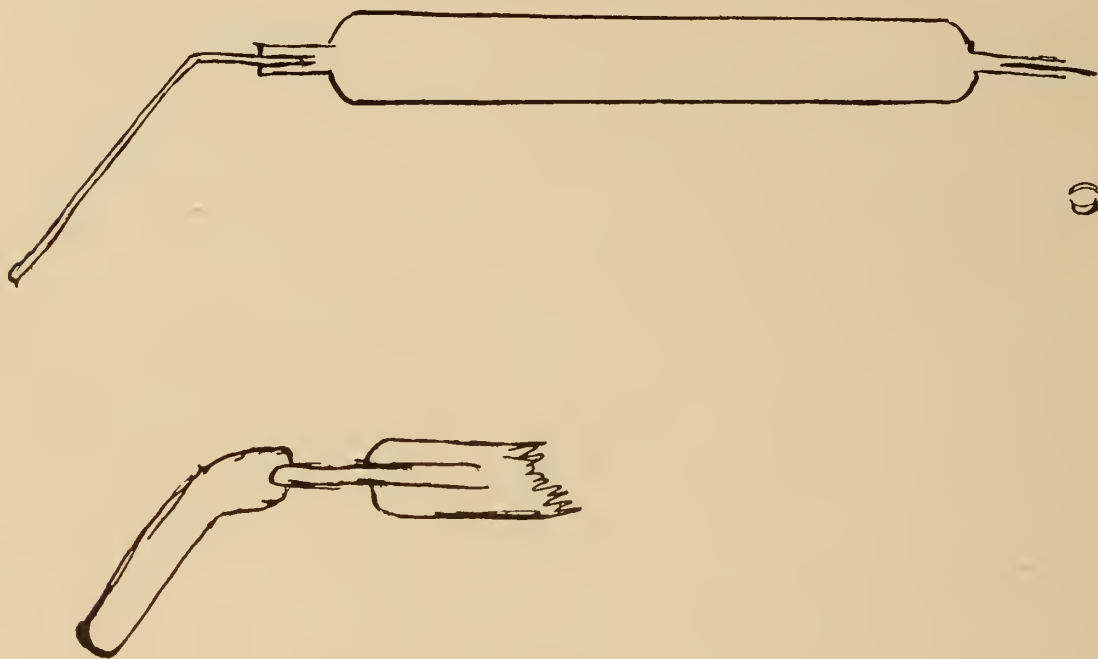


FIG. 3.

sensitive about the nasal cavities, a two to five per cent. solution of cocaine is advisable. Regarding the time of cure, that varies, and is effected according to the extent of the hypertrophy. Some require from ten to twenty sittings; others from six to eight. Every case must be individualized; no set rules can be laid down. It is best to start on the inferior turbinated tissue first, in order to give room for the traveling of electrode. All obstructions must be removed surgically.

Some patients will be found very sensitive, in the beginning, to the induced current. This is also noticeable with



all other forms of massage employed in this cavity. The current travels the distribution of the sensitive nasal nerves, which cannot be avoided. You will often find in the beginning of the first or second treatment the patient wishing to withdraw the electrode, but he soon becomes accustomed to it. Should much resistance on the part of the patient occur, cocaine will relieve all reflex. After each sitting a strong solution of alum, dissolved in alboline or some other compound of its kind, is applied to the massaged part, and well rubbed in by means of a probe armed with cotton.

In children, where the inferior turbinated tissue is found as a rule hypertrophied, electro-vibratory massage has given the best account of itself.

There are no contra-indications for the use of this method. I have used it in all forms of disease about the pharynx and nasal passages, and recommend the same to my colleagues.

The electrode, of which a cut is here given, is one of the many used for the application of the treatment. In some cases it is advisable to use soft material, as sponge and cotton fixed into a conducting holder.

## THE TREATMENT OF HIGH MYOPIA BY APHAKIA.\*

BY L. Y. BAKER, M. D., WASHINGTON, D. C.

RECENT statistics show us that myopia, among the educated at least, is on the increase; not only in the percentage of total ametropia, but also in the degree of near-sight.

We realize this fact from our own observation as well, in that we see to-day an increasingly greater number of myopes of moderately high degree.

The highly myopic person for near work has two courses before him: he can use one eye by holding his work very near without the use of a glass, or he can use glasses and increase his working distance.

In the former case the unused eye diverges, becomes amblyopic, and both eyes run the risk of an increasing myopia. In the latter, he meets with a prohibitive reduction in the size of the retinal images.

Cases are met with from time to time where the eyes are utterly useless, due entirely to the high degree of near sight, which might regain a practical use of the eyes by the removal of a worse than useless crystalline lens.

Another form of myopia, the progressive, is to be included in the benefits to be derived from this operation, and here the results are often even greater, owing to the great liability of detached retina and consequent total loss of vision.

My attention was attracted to this question in 1893 by

\* Read before the Hom. Med. Soc. State of New York, September, 1896.

results obtained through a cataract operation on a dispensary patient with an obscure history, but with an evident myopia of sixteen or eighteen diopters.

This patient enjoyed fair vision afterward without the aid of glasses, although the accommodation was little or nothing.

In January of this year I was consulted by a young lady of twenty-three, who had been treated four years ago by numerous oculists for keratitis with a complicating iridocyclitis, resulting in numerous posterior synechiæ and an increase in the former myopia.

On account of the condition of the anterior capsule, which was covered with shreds and patches of the iris, the degree of myopia could not be accurately measured, but was in the neighborhood of 16D.

As perception was good, and as the acuity of vision was somewhat increased by the aid of a high concave lens, I advised the removal of the lens as the only method of relief.

The left eye being chosen as the one with the worse capsular condition, an iridectomy was made in the superior quadrant, and ten days later a T-shaped capsular incision was made with a Knapp knife-needle sufficiently deep to slightly enter the lens substance.

The iris had been dilated by atropine and tension increased to such an extent that a paracentesis was done on the third day, and on the sixth a linear incision was made, the swollen lens substance extracted, and the anterior chamber well flushed with a boric acid solution.

The eye being dressed antiseptically, and no bad symptoms appearing, no examination was made until the seventh day, when the eye was found in fine condition and the vision better than I had hoped.

Three weeks later an examination of the vision was made: 20-60 was read and she was allowed to try Snellen No. 4, which could be read with ease.

Ten weeks after the operation, lenses,—1.50D. were given for constant wear, a slight corneal astigmatism having disappeared under the operation.



This operation, although generally attributed to Mooren, who reported his results in 1858, belongs really to Beers, a description of it being found in the 1817 edition of his book on the eye.

From 1817 to 1858, however, there is nothing to show that the operation was made use of, and even until long after that date it seems to have been used but rarely, as up to 1890 but 220 operations had been reported, divided among a dozen operators, of whom Fukala (42), Pflüger (40), Thier (38), and Schweigger (36) were its most earnest advocates and were the ones to make the greatest use of it, these four having reported 156 of the 220 cases.

Since 1890 it has come into more general notice, and good results are being reported from its use, and many papers on the subject are to be found in the foreign journals of 1895.

Results similar to those obtained by this operation were attempted by Valpeau, who advised section of certain of the external ocular muscles, and Galezowski, who suggested an operation which had an optical effect only, by the removal of a concentric portion of the cornea. Neither of these procedures, however, has been found of value.

Von Graefe was an early and earnest opponent of this operation, his argument being that sclero-choroiditis was not arrested thereby.

Reported cases of progressive myopia, however, show that there was no increase of the myopia after the operation, and the inflammation subsided during the three or four subsequent years which brought the report down to date.

This operation is indicated in all degrees of near sight above ten diopters in children, and twelve in older persons, except in advanced age; in cases of diminished ocular tension; in any condition of the choroid favoring hemorrhage or detachment of the retina, or in choroidal disease which affects the macula lutea, and those which cause membranous exudates into the vitreous.

Detachment of the retina is the chief difficulty to be feared in this operation, and choroidal changes, due to stretching alone, always contra-indicate interference.

The presence of a plastic sclero-choroiditis rather favors operation unless it is accompanied by floating opacities or exudates in the vitreous, as detachment of the retina is less liable to occur, the retina being bound even more firmly to the choroid than in health.

A preliminary iridectomy is advisable in cases over thirty years of age, as decreasing the liability to irido-cyclitis.

Extraction of the lens should always be preceded by discission, as the immediate extraction of a transparent lens is frequently followed by a dangerous hyperæmia of the choroid, and loss of vitreous is less liable to complicate matters.

In the discission, as in the details of all operations, surgeons differ somewhat ; some advocating slight and cautious prickings, others deep and bold cutting. For instance, Fukala does an ordinary discission ; Valude, a T-shaped incision of the capsule ; while Vossius goes deeply into the lens substance with a Graefe knife.

Washing out the anterior chamber after the extraction of the cortical substance lessens the liability of any débris being left behind, and for this purpose a boric acid solution or the trichloride of iodine are preferable to others.

In all cases the bilateral operation is advisable. In young persons, where one eye only has been operated, the progress of the myopia and choroidal changes will continue along with the unoperated eye ; and divergence of the latter will follow, owing to non-use.

In older persons, where the myopia is stationary and the degree not over 17D. or 18D., one eye only may be operated, but in *all* cases the bilateral operation, as I have said, is more satisfactory.

As for the benefits to be derived from this operation, there are many. In extreme degrees of near sight it has transformed the condition of the patient from that of an almost blind sufferer to one of comparative ease and comfort, by restoring the use of the before useless eyes.

It diminishes the strain and discomfort by the removal of the punctum proximum.

It increases the acuity of vision by the enlargement of the retinal images.

Divergent strabismus, in highly but unequally myopic eyes, has been corrected by the bilateral operation.

It reduces the strength and weight of the lenses necessary, or abolishes the necessity entirely.

It stops the progress of increasing near sight, neutralizes to a greater or less extent the existent myopia, and diminishes the danger of detachment of the retina.

Unlike the condition of an aphakic emmetrope, there is often found to exist in the aphakic myope a false accommodation of greater or less extent. I have never seen its presence accounted for, but it seems to be due to the slightly increased traction during convergence.

In reducing the degree of myopia, its range of action is from 12D. to 18D.

Schweigger cites the case of a reduction of 20D. in a patient of fifteen years where the myopia had been 33D.

It is to be remembered that in the higher degrees of near sight, there is always a weakened or stretched zonula which allows more convexity to the lens and a consequent myopia, higher than the extent which the posterior staphyloma would cause.

#### BIBLIOGRAPHY.

*Von Graefe's Archives.* Vol. xxxiii. part 2, p. 230.

F. SHANZ (Dresden). "On the Improvement of Vision Following the Removal of the Lens in High Degrees of Myopia."

*Medical Press* (London), February 13, 1895. Extracts from a paper by Mr. C. Wray.

PROFESSOR VOSSIUS. *Beitraege zur Augenheilkunde*, xv. III, Heft. p. 49. "Über die operativ Behandlung über die Staroperation."

A. THIER. "Observations on the Operative Correction of Myopia." Trans. Eighth Internat. Oph. Cong., Edinburgh, p. 173.

P. FUKALA. "Correction of High Myopia by Aphakia," *idem*, p. 181.



M. PERGEUS. "On Correction of Short Sight by Aphakia." *Klin. Mon. f. Augenheilk.*, 1895, 42.

W. FUKALA. "Contribution to Operative Treatment of Brachymetropia of Highest Degree." *Przegl. lek.*, Krakow, 1895, xxxix. p. 105.

R. GRAEFE. "Über die Bedeutung der Linse bei Myopie." *Klin. Monatsbl. f. Augenh.*, Stuttgart, 1895, xxxiii. p. 360.

E. GROSZ. "The question of Myopia; Its Operative Treatment." *S. Szemezet*, Budapest, 1895, p. 23.

PFLUGER. "The treatment of High Myopia by Aphakia." *Trans. Eleventh Internat. Med. Cong.*, Rome, vol. vi. p. 56.

EPERON. "On the Operative Correction of High Myopia." *Arch. d'Opht.*, Paris, 1895, xv. 750.

A. VON HIPPEL. "On the Operative Treatment of High-grade Myopia." Stuttgart, 1895.

FUKALA. "Bemerkungen zur Operation hochgradigen Kurzsichtigkeit durch Discission und Berechnung der Bildgrasse." *Aerztl. Centr.*, Wien, 1895, vii. pp. 402, 420, 435, 451, 467, 483, 499, 515, 533, 546.

SATTLER. "Über die Operativ Behandlung der Hochgradigen Myopie." *Berii. d. Versamml. d. Ophth. Gesel.*, Stuttgart, 1865, xxiv. 2542.

Papers 31 and 32, Eighth Internat. Ophth. Cong., Edinburgh, August 7-11, 1894.

FUKALA. "Indications and Contra-indications for the Operation by Discission in High Degrees of Myopia." *Aerztl. Centr. Aus.*, Wien, 1894.

A. ALT. "A Contribution to the Experiences in Removing the Lens in High-grade Myopia." *Am. Journal of Ophthalmology*, St. Louis, 1895, xii. pp. 165-167.

J. DUNBARRY. "Traitement Operative de la Myopie forte progressive par l'Ablation du Cristallin." *Normandie Med.*, Rouen, 1895, x. p. 419.

SCHWEIGGER. "Operative treatment of Myopia of High Degree." *Trans. Amer. Ophth. Soc.*, 1895.

VALUDE. "High Myopia; Extraction of the Healthy Lens." *Proceed. Soc. d'Ophth. de Paris*, January 5, 1892.

## INTRA-OCULAR HEMORRHAGE AFTER THE EXTRACTION OF CATARACT. TWO CASES.\*

BY HAROLD WILSON, M. D., DETROIT, MICH.

INTRA-OCULAR hemorrhage, following the extraction of cataract, is a rather uncommon accident. Many surgeons with an extended experience have never met with a case. De Wecker † reports 8 cases in a total of over 3000 extractions: Knapp, ‡ 1 case: Mooren, 3 cases, and Von Graefe, § 2 cases. Spalding ¶ has collected from the literature of cataract extraction accounts for over 100 cases, and this list does not include the 8 cases of De Wecker's, nor those of von Graefe just mentioned, nor one case reported by Terson. || Doubtless there are many cases still unreported, which if made public would considerably swell this total, so that the accident, if uncommon, is not so excessively rare as some have supposed.

Two cases have occurred in the experience of the writer.

The first was in a maiden lady, aged seventy-eight. The history of the case was one of apparently uncomplicated senile cataract, only moderately advanced in the right eye, in which the vision was still good enough to permit the patient to attend to

\* Read before the Hom. Med. Soc. State of New York, September, 1896.

† De Wecker, *Traité d'Oph.*, vol. ii. p. 1046.

‡ Knapp, *Arch. of Oph.*, vol. xx. p. 78.

§ Dufour, *Trans. Eighth Intern. Oph. Cong.*; Edinb., 1894, p. 92.

¶ Spalding, *Arch. of Oph.*, vol. xxv. p. 92.

Rather curiously Spalding quotes Dufour as saying that Von Graefe told him he had never met with the accident. As a matter of fact, Dufour relates that Von Graefe said he had met with two cases.

|| Terson, *Arch. d'Oph.*, 1894, vol. xiv. p. 110.

her ordinary household duties, although reading and sewing were impossible. In the left eye the cataract was mature, with vision equal to the perception of shadows. Tension normal; field of vision good, and light perception normal. Externally, the eye appeared healthy. Temporal and radial arteries somewhat tense, though not markedly atheromatous. I operated upon the left eye at the Grace Hospital, March 26, 1894, at 2 P. M., making a simple extraction. The corneal flap was 4.5 to 5 mm. in height, the incision lying exactly in the sclero-corneal junction throughout its entire extent; no conjunctival flap. The lens was delivered easily. On making further pressure over the cornea to expel the remnants of the cortex, there was a slight escape of fluid vitreous. The apposition of the lips of the corneal wound was perfect, and the pupil was round and central. The cornea was somewhat collapsed after the completion of the section, but the anterior chamber soon re-established itself. The eye was dressed with a light pad of lint and cotton, held in place by adhesive plaster strips. Following the operation, the patient was carried to her bed in the ward. Fifteen minutes later I visited the patient, and found her lying quietly in bed. The condition of the operated eye was entirely satisfactory; the dressing was re-applied, a similar dressing placed upon the right eye, and the patient ordered to remain recumbent and quiet. Between 5.30 and 6 P. M. of the same day, while the patient was taking her supper from the hands of the nurse, she suddenly choked on a fragment of bread, grew black in the face and seemed about to suffocate. The nurse, somewhat alarmed at the patient's condition, raised her to a sitting posture and pounded her upon the back, whereupon she coughed violently and vomited. Severe pain in the operated eye followed immediately, and the pad covering it became streaked, then soaked with blood. I was summoned, and saw the patient about 7.30 P. M. The compress was saturated with blood. The hemorrhage was so profuse that considerable blood had run down the side of the face and neck. The patient complained of intense and constant pain in the eye. Upon removing the compress, I found a large blood clot lying between the lids. Cocaine was instilled, the clot removed, and the lid raised. The corneal wound gaped widely and was filled with clotted blood, the prolapsed iris, and a mass of tissue which could not positively be identified—all wedged into the incision



with so much force that the corneal flap was everted. The material filling the incision was removed with the scissors and forceps as thoroughly as possible, without using too much force, but the wound could not be closed. The eye was dressed with a strip of court plaster, after which there was less pain, and the patient slept fairly well. The following day the eye was redressed. The wound still gaped and was filled with clot, iris, etc. No perception of light. The subsequent history of the case is that the wound gradually healed, the eye recovered from all symptoms of inflammation, and in the course of a month or so, during which time the patient was under observation, it underwent partial atrophy without pain or tenderness. The vision remained *nil*.

After the accident took place the patient admitted that similar choking spells were not rare with her, and that they were sometimes brought on by eating very soft food. If this fact had been elicited before the operation, a rigid fluid diet might have prevented the misfortune and secured a useful eye, since it seems likely that the existing degeneration of the choroidal blood vessels was not such as to precipitate the hemorrhage in the absence of the choking, coughing, and vomiting as exciting causes. The rupture of the hyaloid and the slight loss of vitreous occurring during the operation probably helped to facilitate the hemorrhage.

The second case occurred in a lady aged about sixty. My notes of the case are not to be found at this time, so that some details of the case are missing. The patient had chronic glaucoma and mature senile cataract in both eyes. Tension plus. Vision of right eye equaled the imperfect perception of light. Vision of left eye equaled zero. At the patient's request, I consented to remove the lens in the right eye, in the hope that vision might be slightly improved, although the chances of failure were fully explained to her. The patient agreed to assume the unavoidable responsibilities of non-success. The extraction was made with iridectomy, through a low corneal flap, and the lens was delivered without accident. Just as the toilet of the operation was completed and the eye closed for the application of the bandage, there was a sudden severe pain in the eye, a gush of vitreous and a profuse intra-ocular hemorrhage. The subsequent history of the case was uneventful. The wound healed, the

blood in the eyeball was absorbed, and the case progressed without further complications. The eye remained absolutely blind.

The causes of the accident in each of these two cases are reasonably plain. In the first case, the senile changes in the structure of the choroidal blood vessels, whereby their normal elasticity and strength were lessened, together with the rupture of the hyaloid during the operation, constituted the predisposing causes, and the sudden rise of blood pressure in these vessels, during the attack of coughing and vomiting, the exciting cause. It seems probable that, had not this paroxysm occurred, the progress of the case might have been normal, and a useful eye secured. In the second case, the sudden lessening of tension in the vitreous chamber, when the lens was removed, caused the rupture of the already weakened blood vessels of the choroid. It is to be observed that both of these cases were treated without enucleation, although, in the opinion of many surgeons, in order to prevent purulent inflammation this operation should be performed as soon as the accident has declared itself. The final condition of the eyeballs, so long as the patients were under observation, was such that there was no likelihood of subsequent trouble from them, and their preservation seems to have been justified.

## ADENOID INFLAMMATIONS OF THE PHARYN- GEAL VAULT.\*

BY WILLIAM S. PEARSALL, PH. B., M. D., NEW YORK CITY.

IN looking over the literature of this subject one is at once struck with its great volume; evidencing the vast amount of work that has been accomplished in a comparatively short time, for it is not so long ago that Meyer first brought these conditions of the vault of the pharynx to the notice of the professional public. In the many books, pamphlets, monographs, etc., that have been written may be found thorough and detailed discussions of the etiology of these adenoid hypertrophies of the pharyngeal vault; the local and remote injurious effects of which they are the cause are fully elucidated; the symptomatology is carefully and thoroughly worked out; and very clear, precise, and positive indications are formulated in regard to the institution of operative measures. It is the almost unanimous conviction of these authors that the early and complete eradication of this offending organ is the only means of cure. Innumerable cases have been reported, showing the wonderful cures, the marvelous transformations, both physical and mental, that have resulted from operations. So imbued with the operative fever are some of our enthusiastic rhinologists that they do not hesitate to accuse the physician who permits an adenoid to remain *in situ*, or who advises any treatment other than immediate removal with forceps or curette, of "culpable ignorance."

So positive are these authors, with such an air of authority

\* Read before the Hom. Med. Soc. State of New York, September, 1896.



do they speak, that we feel almost compelled to believe that there is nothing more to be said; that in the future no objection can be made, no question raised as to the value of any treatment other than surgical treatment in these cases.

With all due respect to those eminent men, to whom the profession owes the highest credit for the work they have done and the valuable discoveries they have made, there exist a number of conservative thinkers who believe, and base their beliefs upon clinical experience, that medicine and not surgery is the foundation upon which the treatment of these troubles should be based; that surgery is here, as it is in other cases, not the first but the last resort. And, I feel sure that the experience of my hearers will bear me out when I say that, in the majority of cases of adenoid enlargement, medical treatment is alone sufficient to effect a cure; that the cases in which surgical intervention becomes necessary are in the minority; that while there are hypertrophies of the adenoid tissue at the vault of the pharynx in which ablation is the only alternative, there are many more which, under proper remedial treatment, either disappear or become so modified as to cause no functional disturbance.

Before speaking of the pathological conditions that we find in this locality, let us take a very brief glance at its histology and physiology. The naso-pharynx, situated below and in front of the basilar process of the occipital and the upper cervical vertebræ, is lined with ciliated epithelial cells both on the sides and from the posterior wall forward to the nasal surface of the soft palate. Located in the mucous membrane are numerous acinous glands, and scattered through it are very many lymph corpuscles. At certain points these corpuscles become collected in masses, the largest being in the upper part of the vault, above and behind the fossæ of Rosenmüller, and is the pharyngeal tonsil or tonsil of Luschka. Continuing from the pharyngeal tonsil is a line of adenoid tissue extending to the vicinity of the mouths of the Eustachian tubes,

where it spreads out to form the tubal tonsil, the *Tubenmandel* of the Germans. From here another line extends down to the soft palate to form the palatal tonsil, and down the sides of the pharynx, just behind the posterior pillars, to unite with the glandular structure at the base of the tongue or lingual tonsil; thus forming the so-called ring of Valdeyer, the correct understanding of which has been said to be the key to the pathology of the nose and throat. These lymph corpuscles may be considered to be an exposed lymphatic ganglion, and they have been compared by Luschka to the lymphoid elements of the intestine. The lymphatics with which this locality is supplied empty into the great lymphatic channels located near the base of the brain, or into the lymphatic ganglia about the greater cornua of the hyoid bone. And here we see the intimate relation existing, especially in the child, between the adenoid tissue of the pharynx and the neighboring glands. These elements play an important rôle in the prevention of disease; they stand guard, as it were, over the respiratory and digestive tracts. The mucus which constantly flows from the secretory glands bathes the mucous membrane and keeps it moist; it entangles any infectious germs it may meet, it attenuates them, and at the same time dilutes the toxins formed and renders them much less harmful. The vibrating cilia incessantly urge the mucus along and so carry away the dangerous material. In addition to these, phagocytic corpuscles are extremely abundant and any deleterious matter that may remain is destroyed by their peculiar and well-known action.

Thus we see that Luschka's tonsil is similar to, though not identical with, other glandular structures. It is unprotected and lies exposed to all variations of temperature and blood pressure. It lies directly in the way of infectious germs, and is placed there for the special purpose of destroying them. So long as the functional mechanism proceeds properly all is well, but let some disturbing element enter,—some sudden chill, some irritation,—and an inflammation will be set up whose manifestations will

differ from inflammations of other glands as these organs themselves differ in structure and location. But we will have the same general divisions: we will have an acute inflammation or, as it has been called by Helme, adenoiditis; we will have a subacute inflammation or, if you will permit the term, a parenchymatous hypertrophy; and a chronic inflammation or interstitial hypertrophy; the last being the classical condition described in medical literature as "hypertrophied Luschka," "adenoid vegetations of the vault of the pharynx," and "hypertrophied pharyngeal tonsil." In this kind of hypertrophy, as in interstitial hypertrophy of the faucial tonsil, I believe that removal by surgical means is, in the majority of cases, a necessity. But this class of cases includes only a comparatively small proportion of those that present the well-known symptoms of post-nasal obstruction; and it is just here that it would seem that the error had crept in. Rhinologists have considered all enlargements of the pharyngeal adenoid tissue as chronic hypertrophies, while, in reality, a large majority should find their place in one of the two other classes.

Admitting the truth of what has been so well and fully written of adenoid hypertrophy proper, let us proceed to the consideration of acute and subacute inflammations of this locality; conditions which are especially susceptible to medical treatment.

The etiology of acute adenoiditis differs but little from that generally found in descriptions of adenoid hypertrophy. There is a depreciated physical condition, either from some unknown cause or as a result of some of the great infectious diseases, such as scarlet fever, measles, typhoid fever, etc. The system being thus weakened and the nourishment decreased, the function of the naso-pharyngeal structures is interfered with; they have become worn out by their long encounter with infectious germs, both internally and externally. They are then more susceptible to the poison and an acute infectious adenoiditis supervenes. Another and perhaps a more fruitful predisposing cause is the condition of the mucous membrane produced



by repeated colds, causing such changes in the structure and normal function that it becomes a source of auto-irritation and infection. The nasal obstruction induces an unusual flow of blood to the parts, with stasis, swelling, increase of tissue elements, interference with the natural cleansing of the cavities, blocking up of secretion, which in its turn becomes less fluid, perhaps desiccated, and forms a fresh nidus of irritation. Thus we have in the pathological conditions themselves a vicious circle tending, if left to itself, to continue or to exaggerate the existing inflammation. Another frequent cause is extension from an already developed inflammation in the neighboring structures, the nose, faucial tonsils, pharynx, etc. The most frequent exciting cause is the ordinary "cold," be it of microbic or vascular origin. Traumatism due to too vigorous an examination of the rhino-pharyngeal cavity with a septic finger is very likely to light up an acute adenoiditis.

The symptoms of acute adenoiditis vary considerably, according to whether the inflammation attacks a previously normal structure or one that is already in a diseased state. In the first case the trouble is usually ushered in with more or less fever, sometimes running as high as  $103^{\circ}$ – $104^{\circ}$ , usually about  $101^{\circ}$ ; full pulse, anorexia, etc.; the usual systemic phenomena of an acute cold. The nose, at first free, soon becomes stopped, and there is dryness and irritation of the post-nares, evidenced by a constant desire to clear that region by hawking and *scréatus*. If old enough, the patient may complain of dryness and uncomfortable feeling in the pharynx, sometimes amounting to positive pain. The patient is depressed, breathes through the mouth, and at night snores, wakes up startled, and has that peculiar irregularity of breathing characteristic of nasal obstruction. There is usually headache referred to the base of the brain, due, according to Luschka, to neuralgia of the nerve of Bock, a branch of the superior pharyngeal. The glands at the angle of the jaw are swollen and sometimes sensitive to touch.

Objectively, the throat is reddened and congested

throughout. The lateral chain of glands behind the posterior pillars is apt to be swollen and inflamed, as are the faucial tonsils. The palate is relaxed and may be slightly œdematous. A light-colored mucus is seen streaming down the posterior wall of the pharynx. If the rhinoscopic mirror can be used, the post-nares will be found filled with a large mass, whitish in color, owing to the thick layer of secretion which covers it. Digital examination at this time reveals a pulpy mass that feels like a lump of caviare, or, as it is often described, "a bunch of worms." This mass is soft, friable, and bleeds very easily. The anterior nares may be perfectly pervious, or the mucous membrane and turbinated bodies of one or both sides may be swollen, engorged, and covered with a thick, light-colored, slimy mucus.

The fever and acute symptoms pass away in one or two days and under appropriate treatment the entire symptom complex subsides, leaving the tissues in their previous normal condition. But if left to itself, or improperly treated, the result is often very different. The fever and glandular complications disappear, leaving the adenoid tissue still swollen and engorged; covered with secretion; blocking up the posterior nares, and hence causing a continuance of the usual symptoms of adenoid vegetations. This condition may continue for months without the supervention of the chronic condition, with its formation of connective tissue. Nor is this difficult to understand when we think that, by the swelling of the tissues, the proper normal drainage and cleansing are seriously interfered with and the secretions and infectious matter retained in and about the many interstices of the adenoid structure. Thus the swollen tissues prevent the removal of the secretions, and the retained secretions, acting as an irritant, keep up the inflammation and swelling of the post-nasal structures and so on, *ad infinitum*. Or the enlargement may, in a great degree, subside, leaving the pharyngeal vault partly free, and consequently those symptoms which are due only to obstruction disappear.

There then remains a post-nasal catarrh, aggravated and kept up by the irregularities and interstices of the adenoid tissue, in which infectious particles become located and from which they are dislodged with extreme difficulty. In this condition the child may go along, experiencing little or no discomfort.

Digital examination of the pharyngeal vault discloses a condition varying with the character of the inflammatory process and the length of time during which it has been going on. At first there will be a soft, friable, easily bleeding mass, composed of swollen and congested lymphoid tissue, in which there is but little reduplication of structural elements. Later, the lymphoid cells are increased in number, and a certain amount of intercellular connective tissue is deposited. The examining finger then recognizes in the mass a greater solidity, which is more or less marked in accordance with the amount of connective tissue formed. As the disease progresses the proportion of connective tissue becomes greater and greater, destroying the lymphoid elements by cutting off their nutrition, and there ensues a chronic interstitial hypertrophy. This formation of connective tissue depends in part upon the duration of the disease, but more upon the personal predisposition of the patient and the underlying dyscrasia. Some cases will go along for months or years with little or no deposit of connective tissue, while in others the growth will become hardened and tough in a few weeks.

In acute adenoiditis the symptoms are all aggravated and intense, while in the subacute variety they are of the same character, but more subdued. An acute inflammation engrafted upon a subacute condition will usually present less intense disturbance than when it attacks the healthy tissues, owing perhaps to the greater susceptibility of the already inflamed structures to slight colds or to less virulent infections.

The diagnosis of these cases is not usually difficult. The fever, the pharyngeal inflammation, and the granular



involvements, together with the symptoms of post-nasal obstruction, are usually sufficient.

The prognosis of both acute and subacute adenoiditis is usually good, if under careful and proper treatment. With improper care or neglect complications may arise which not infrequently present conditions of great gravity. Ear troubles are often encountered. In the majority of cases they are the result of obstructive pressure on the orifices of the Eustachian tubes. Nevertheless, acute otitis media undoubtedly occurs, either as a concomitant or a sequence of both the acute and the subacute forms of adenoiditis. The otitis which accompanies the latter form is apt to be less painful, less intense, and more prolonged in its course, owing possibly to the greater attenuation of the infective germs. So intimately connected and so interdependent are the tissue elements of the vault of the pharynx that the extension of an inflammation of these structures to the ear would naturally be expected more frequently than seems to be the case. The statistics gathered from my private practice and clinic are not sufficient in number to warrant any positive statement as to the frequency with which ear complications occur, while the published statistics are not only contradictory, but are compiled from all three forms of the disease.

Purulent or muco-purulent secretions cannot be long in contact with healthy mucous membranes without causing trouble; hence we are likely to have pharyngeal and laryngeal complications and, not infrequently, bronchitis, spasmodic and croupy coughs, and reflex troubles, such as eneuresis, appearing with every acute recurrence of adenoiditis. In children the ability to expel secretions from both the upper and lower respiratory tracts is very limited, while on the other hand the powers of absorption are much greater than in the adult. This results first in the swallowing of infectious matter, producing catarrhal disorder of the stomach, and second in the absorption of the toxic products of germ life, for the propagation of which the retained secretions present a rich and fertile

soil. Consequently we have an infectious intoxication, a poisoning of the blood and hematopoietic system in general, whereby an increased amount of labor is thrown upon the phagocytic cells which, owing to the digestive troubles and the consequent depreciated nutrition, they are unable to perform. There then appear anæmia, loss of appetite, clogged and swollen glands, and impeded growth, both mental and physical; a well-known picture of what may be called the "adenoid cachexia." These points are perhaps unnecessarily dwelt upon, not through any desire to overestimate their gravity, but to emphasize as strongly as possible the necessity for early, careful, and energetic treatment of the disease upon which they depend. For, once having subdued the acute and painful symptoms, the busy general practitioner is very prone to drop the case, and the time soon passes when the best results—both preventive and curative—may be obtained.

The local treatment of these troubles consists in the careful cleansing and disinfection of the pharyngeal vault and the adjoining cavities. Such cleansing and disinfection are absolutely necessary to success. The nasal cavities are filled with a secretion so thick and tenacious that the cilia are unable to carry it away, and so it remains a constant and increasing source of irritation to every part with which it may be in contact. The removal of this secretion is most easily accomplished by the use of a normal salt solution containing 25 per cent., of borolyptol. Owing to the obstructed condition of the post-nasal region the use of the post-nasal syringe is apt to be productive of more harm than good, and the cleansing must be done principally through the anterior nares. Nasal douching is never desirable, nor is it necessary, in these acute or semi-acute conditions, to flood the nose with solution in order to cleanse it. The mucous secretion simply needs a little dilution, and it will be taken care of naturally. This can be best attained by the use of the above solution in a coarse and not too forcible spray. This spray should be directed into both anterior nares, the pharynx, and, if

possible, the post-nares. The nose should be cleansed twice a day, and at each cleansing the spraying should be repeated from three to five times at intervals of two or three minutes. As the diluent effect of the watery solution lasts but a short time, much may be gained by employing an oily application such as albolene or benzoinol, the latter being preferable. This may be used as a spray or in bulk, by tipping the patient's head back and dropping from five to ten drops in the anterior nares with a medicine dropper. It is soothing to the inflamed surfaces, while at the same time it dilutes the secretion present and acts as an artificial mucus, thus helping to carry off the disturbing matter.

The local use of iodol is very effective in cases where there is much infection. Dermatol and the glycerole of resorcin are sometimes usual under the same conditions. Powdered aristol has also been recommended, but I believe that the application of any powder is too irritating to be valuable in acute inflammations of the mucous membrane. Disinfection may be obtained in much better ways.

The diet should be restricted, or, if the case is a severe one, a special diet prescribed.

The question of isolation is an open one, and while there is little doubt that it is better in every way for a patient suffering from acute disease to be secluded, no specific bacterium has, so far as I am aware, been attributed to this disease.

In parenchymatous adenoiditis the cleansing local measures must, for the reasons already specialized, be regularly and systematically carried out.

The diet, in these cases, should receive careful individual consideration. The little patients need an abundance of nourishing food, but as a rule the digestive organs are functionally impaired and they are dainty and hard to please. Hence considerable tact and management are often required. Outside of animal foods, milk and cereals, especially the coarser cereals, contain the elements most frequently demanded by the depreciated state of the



nutrition. An extra amount of oily matter should be supplied, either by the administration of some form of cod-liver oil, or, if that overtaxes the stomach, by the addition of a goodly quantity of cream to the milk which the patient takes with its meals. Where neither of these seemed to be comfortably assimilated, a mixture of glucose and dilute muriatic acid has been substituted with excellent results.

The hygienic care of the child should also receive attention. A daily tepid bath should be followed by a thorough rubbing with dilute alcohol or, if necessary, inunctions of sweet oil or cod-liver oil. Unless contra-indicated, the patient, upon rising in the morning, should have the face, neck, and upper part of the chest bathed in cool water and then vigorously rubbed with a rough towel. An abundance of outdoor exercise, or at least an abundance of fresh outdoor air, must be insisted upon.

Although last to be mentioned internal medication is of the utmost importance, for, underlying the local inflammation, there is a constitutional habit of dyscrasia, which can only be thoroughly and definitely eradicated by the internal administration of drugs. While this is especially true of the more acute forms of adenoiditis, it also obtains in the chronic form; my experience having shown that the post-operative results are far better if the operation is preceded by a course of internal treatment.

The drugs most frequently indicated in acute adenoiditis are familiar to us in the treatment of snuffles in infants and acute colds of young children, the most prominent being: Acon., Bell., Kali mur. and phos. Mercurius, Iodine, Sambucus, Sanguinaria, etc.

After the acute stage has passed and symptoms of obstruction still remain, such drugs as Arsen iod., Calc. carb., Calc. phos., Calc. iod., Calc. fluor., Iodine, Kali bichr., Lycopodium, and Sanguinaria nit. will be found more useful.

The lime salts have been of especial use to me, particularly in those cases in which the characteristic cachexia was well marked, and when there was a tendency to glandular involvement.

*Kali bichrom.* acts well when the peculiar secretion of that drug is present, and will not only act upon the secretion but will have a decidedly beneficial effect upon the adenoid growth.

*Lycopodium* has cured several cases of this trouble for my friend Dr. J. B. Garrison, in which the right-sided character of the affection was particularly marked.

*Sanguinaria nit.* has been of service to Dr. Malcolm Leal, who gives the following indications: "Hypertrophy of Luschka's tonsil, with hyperæmia in the vault of the pharynx, and in the posterior turbinated hypertrophy, with congestion."

CASE I. L. H., aged eight years, was sent to me for advice concerning a post-nasal catarrh. The trouble had begun two years previously, when upon the occurrence of a cold (probably) there had appeared an otitis media, accompanied with what was undoubtedly an acute adenoiditis. Since that time there has been a constant obstruction of the nasal passages, with more or less constant discharge of a thick, whitish secretion, both anteriorly and posteriorly. During this time she has breathed almost constantly through the mouth, snoring at night, with restlessness and starting in her sleep. At the time she was first seen the mouth was constantly open, and the face was beginning to assume the characteristic appearance of post-nasal obstruction. She appeared badly nourished, her appetite was poor and variable. There was also a slight enlargement of the cervical glands and a thin watery discharge from the left ear. Examination showed but little trouble in the anterior nares. The tonsils were a little enlarged and congested, as were also the pillars of the fauces. A large quantity of thick, tenacious mucus was streaming down the posterior wall of the pharynx. Digital examination revealed the naso-pharynx to be apparently more than half filled with a soft, friable, easily bleeding mass of tissue. Owing to the accompanying ear trouble an operation was advised and refused. Thereupon the patient was put upon *Calcareæ fluor.* internally, and a normal salt-solution spray, followed by benzoin, containing pine-needle oil, locally. The improvement was very slow at first. After two or three weeks the appetite began to improve, the general health became better, and the

appearance of the child grew more healthy. The sleep became less restless and she was less subject to "colds" than formerly. This was about all the improvement that took place during the first winter, but the treatment was kept up during the summer, and when seen in October she was sleeping naturally and breathing through the nose most of the time. The aural discharge had stopped and has since returned but once. During the second winter I saw her but once, when there was a slight recurrence of the trouble, due to an acute rhino-pharyngitis, which was carefully attended, and her mother told me six months later that none of the former symptoms had appeared since.

CASE II. Philip H., aged ten years, who had been a mouth-breather, as far as his parents knew, for about a year and a half, came to me in October, 1894. He then presented the usual symptoms of adenoid growths, without implication of the middle ear. He was given *Calc. iod.* four times a day, and benzoïnol at night. Improvement began before the end of the second week, and continued for about six weeks, at the end of which time the only remaining symptom was a slight post-nasal discharge. The adenoid tissue, which at first had nearly filled the pharyngeal vault, was now, as nearly as I could judge, about one-third its former size. In the two years following there have been two or three relapses, which were easily controlled.

The case first cited was one that, according to the prevailing usage, should have been operated, without delay, but, viewed in the light of subsequent experience, it was evidently a case of subacute adenoiditis, and like most of those cases was susceptible of cure without surgical interference, when properly and persistently treated. The second case is representative of a large class which the specialist very frequently meets, and which are not only capable of cure by internal medication, but should never be thought of surgically until other means have been thoroughly tried.

Numerous cases of this kind could be cited, but I will only weary you with one more, and that principally to show the rapidity with which drugs sometimes act.

CASE III. Harry M., aged nine years, when brought to me in December, 1895, presented the following condition, which had



been approaching gradually during the past three years. He had been constantly under treatment, *iron*, etc., with constant advance of the trouble. He was slender, small for his age, and very far from strong. He was unable to go to school, partly on account of lack of strength, and partly because every two or three weeks he would have an attack of acute tonsilitis, which would keep him in bed for four or five days. Indeed, in the intervals between these attacks the inflammation seemed rarely to subside entirely, so that there was more or less soreness of the throat most of the time. His appetite was poor. He breathed almost constantly through the mouth, and presented in a rather exaggerated form the usual sleep conditions of nasal obstruction. There was also a beginning impairment of hearing. The tonsils were slightly swollen and congested, as was the glandular tissue behind the posterior pillar. The posterior wall of the pharynx was covered with a thick, white tenacious mucus. The mirror discovered a soft, pulpy mass, which apparently filled the post-nasal cavity.

He was put upon *Calc. phos.*, with the usual local treatment. At the end of a week he had another such recurrence, which was the last that he has had. From that time he began to improve. His appetite returned, and he began to grow stronger. His sleep became more calm, and in two months the obstructive symptoms had diminished so much that they caused but little annoyance. As his improvement began and continued during the winter months, I have little doubt that it will prove permanent.

## LOOKING BACKWARD AT STRABISMUS.\*

BY THOS. M. STEWART, M. D., CINCINNATI, O.

THE title of this paper should be taken as an index of the writer's experience, and not as a review of the subject in the light of the later views of other ophthalmologists. Early in our experience we found it necessary to select the operation for each case of cross-eye, because no single operation would meet the requirements in all cases:

In 1892 we formulated a few rules as an aid to medical students in studying cases of muscular deficiencies; these rules, altered by the experience of the past three years, form the basis of this paper in regard to convergent squint.

1. No apparent deviation of the eyes. Diplopia with the red glass not due to lesions in the nervous system. Operation based on the findings of the phorometer.

2. Alternating convergent squint. Full correction of the refractive error will in many cases give apparent parallelism. Later, tenotomy of the internal rectus of the eye that usually squints; with correction of any error of refraction.

3. Squint always fixed in the same eye. Tenotomy of the internal rectus of the squinting eye is many times sufficient, if the external rectus of the eye retains its full power. If not, then combine with the tenotomy of the internal rectus an advancement of the external. Full correction of refraction is also here required.

4. Squint always fixed in the same eye, with great diminution of sight in the squinting eye. Operate as in suggestion No. 3; and, later, do a tenotomy on the internal rectus of the other eye.

\*Read at Missouri Institute of Homeopathy April, 1896.

5. Conditions the same as in suggestion No. 4, but with paralysis of the external rectus of the squinting eye. The best results are obtained by a tenotomy of the internal recti of both eyes, and an advancement of the external rectus of the left eye.

6. In cases of squint with good vision in both eyes. We have found it necessary to operate the squinting eye, and later to do a tenotomy on the internal rectus of the other eye.

We consider that cases complicated with corneal opacities, choroidal, retinal, or other lesions which interfere with vision, are to be dealt with by more extensive operative interference than simple tenotomy.

Our operative experience in these cases of convergent squint covers the points referred to in these suggestions. In children we have never operated under six years of age. We have seen vision improve after operation and correction of errors of refraction, so that a patient who could distinguish only large letters, even with lenses, after a varying period of six months to two years, gave by tests a vision of  $\frac{20}{40}$  to  $\frac{20}{20}$ . Some cases of divergence after tenotomy of the internal rectus have been examined by us as late as five years after the operation, and vision had improved from  $\frac{20}{200}$  to  $\frac{20}{40}$ . One case of eccentric vision, in which a tenotomy was followed by a divergence of the visual axes, showed a vision of  $\frac{20}{50}$ , after a lapse of five years. An advancement of the external rectus was made, and in six months a vision of  $\frac{20}{30}$  was obtained with correcting glasses.

We have had failures of course ; probably more than we are aware of, because of the difficulty of keeping track of cases, even with care to keeping accurate records. Our experience is that cases *not* benefited fail to return because of discouragement. However, this is strabismus as we see it, looking backward, over an experience of but seven years; and we are ready to receive suggestions and advice from the older and more experienced surgeons present. The writer would have preferred to have listened to them expound this subject guided by the rich experience which is theirs, but the subject has been brought to mind, ready for the sharp scalpel of disagreement, the caustic treatment of the experienced surgeon, or the mild collyria of those with whom these remarks find acceptance.



## A CASE.

BY ROBT. G. REED, M. D., LOUISVILLE, KY.

**M**R. W. T., aged twenty-four years, came to me to have his eyes examined, May 20, 1896. He gave the following history :

Five years ago, while attending school, he began to be troubled with headaches and pains in the eyes. The headaches increased in severity until he suffered from general nervous depression, with pains in the lower extremities. He had suffered from nasopharyngeal catarrh for a number of years preceding the trouble with the eyes.

During the past five years he had been under the care of a number of specialists, who, in turn, fitted him with glasses, performed numerous graduated tenotomies, on both internal and external recti muscles, and removed the anterior portion of the inferior turbinated of the left side, besides using various forms of local and internal treatment, with only temporary relief.

The symptoms presented at his first visit were: intense pain in the vertex, extending to the sides of the head, as if pressed upon by a heavy weight ; pain in the eyes, worse on attempting to look at anything ; pain across the head was aggravated by trying to fix his mind on any subject. It required a great effort for him to relate the history of his treatment. Would tell the same thing over a number of times, and was easily confused as to dates, etc. He was mentally depressed and felt best when not trying to think of anything. He feared that he would lose his mind, as he forgot so easily. Could not get enough sleep, and although he would sleep all night and much of the day, his sleep was not refreshing. Could not use his eyes for reading, even for a few minutes at a time. Could not even bear the light or heat of the sun, and was unfit for mental or physical work of any kind.

His extrinsic muscles were weak and spasmodic in their movements, and the ciliary muscle very irritable.

He was then wearing the following :

$$\begin{aligned} \text{O. D.} + .50 \text{ D}^s \text{ } \bigcirc + .75 \text{ D}^c \text{ ax. } 90^\circ \\ \text{O. S.} + .50 \text{ D}^s \text{ } \bigcirc + .75 \text{ D}^c \text{ ax. } 90^\circ \end{aligned}$$

This correction was not entirely comfortable ; and a test without a mydriatic gave :

$$\begin{aligned} \text{O. D. } \frac{2}{3} \frac{0}{0} ? + .75 \text{ D}^c \text{ ax. } 90^\circ \overline{=} .75 \text{ D}^c \text{ ax. } 180^\circ = \frac{2}{1} \frac{0}{0} \\ \text{O. S. } \frac{2}{3} \frac{0}{0} ? + .50 \text{ D}^c \text{ ax. } 90^\circ \overline{=} 1 \text{ D}^c \text{ ax. } 180^\circ = \frac{2}{1} \frac{0}{0} \end{aligned}$$

A four-grain solution of atropine was then used three times a day for three days, when the ciliary muscle was completely paralyzed, and the test then resulted as follows:

$$\begin{aligned} \text{O. D. } \frac{2}{7} \frac{0}{0} + .25 \text{ D}^s \text{ } \bigcirc + 1.25 \text{ D}^c \text{ ax. } 90^\circ = \frac{2}{1} \frac{0}{0} ? \\ \text{O. S. } \frac{2}{7} \frac{0}{0} + .25 \text{ D}^s \text{ } \bigcirc + 1.25 \text{ D}^c \text{ ax. } 90^\circ = \frac{2}{1} \frac{0}{0} ? \end{aligned}$$

The above combination was worn with marked relief of many of the symptoms. But while his condition was improved, complete relief did not follow. It was observed that the patient suffered from frequent attacks of cold, and that during these attacks, the pains in his eyes, head, and even in his lower extremities returned, but with diminished severity. The nasal cavity, which had been explored at the outset, and found to be in a hyperæsthetic condition, with chronic swelling of the erectile tissue, was treated by application to the turbinated bones of

Iodine....	.....	grs. x
Iodide of Potassium.....	.....	grs. xx
Glycerine.....	.....	3 j

Improvement was marked after the second application, and has remained permanent thus far. He is now able to attend to his business, that of a farmer, with his mind clear, and his nerves steady, is active and energetic, eating and sleeping well, and awaking refreshed, and is altogether like another person from what he was four months ago. And the constitutional remedy given from first to last was argentum nit., which seemed to do all that could be desired, after the local irritation was removed.

This case may be of interest, by illustrating the inter-dependence of the various organs of the body on each other, and how a comparatively slight irritation in one part of

the body may cause great disturbance in some remote member.

It has been said that pain is the "Danger signal," or, "The cry of an organ in distress"; but physiology and "her sick sister," pathology, teach us that the signal may be displayed far from the point of real danger. This is no doubt due to some diathesis or dyscrasia affecting the system as a whole, and having its seat in those watch-towers of the regulative system known as the *ganglia*. In other words, when the central office has been notified of a certain local disturbance, the operator being a little sluggish, carelessly makes the wrong connection, and the message is miscarried.

Here is a case in which the pain extended to remote parts of the body, disappearing after the proper remedy was applied and the local irritation removed. The reason for thinking that the primary point of irritation was the nasal cavity, is that the full correction of the refractive error did not give the relief desired.

It also illustrates the folly of operating upon muscles before the cause of the disturbance is definitely decided.



## MATERIA MEDICA OF THE NOSE AND THROAT.

BY A. WORRALL PALMER, M. D., NEW YORK.

### RHUS TOXICODENDRON.

Acts mostly upon the muscular and glandular tissues, little upon the mucous membrane. In the nares we find it indicated in \*glanders, \*catarrh with greenish offensive discharge, accompanied by severe aching in all bones and when caused by dampness; \*erysipelas of pharynx and larynx; \*membranous or croupous pharyngitis; \*œdema of fauces with hard swelling of parotid or submaxillary glands, and sticking on swallowing, the tip of uvula appears like drop of fluid or jelly, restlessness, especially in rheumatic subjects or during erysipelas; \*diphtheria, pseudo-membrane bloody and dark, parotid, glandular and cellular involvement, sometimes suppuration, bloody dribbling, occasionally during sleep, restlessness, desire to be carried, \*post-diphtheritic paralysis of pharynx and larynx (*Gels. and Zn. phos.*), this and cimicifuga are the cardinal remedies for rheumatic pharyngitis (*Colch.*); \*anæsthesia of pharynx (*Caust. and Gels.*); \*it has relieved or cured sequelæ of typhoid-pneumonia, as, stenosis of larynx, hemoptysis, chronic hypertrophy of larynx, and papillomata; \*short, racking cough, from tickling and irritation under upper half of sternum, < before midnight, and in damp weather, with pain in back and limbs, and restlessness; \*aphonia or dysphonia from long use of voice with aching and tired feeling in larynx < the longer at rest and > by slight use; \*tracheal syphilis.

## SANGUINARIA CANADENSIS.

**Nares.**—(*Objective*).—\*Acute purulent rhinitis of children. \*Tertiary syphilis with various-sized diphtheritic-like exudations; when removed leave wounded bases and dry or fluent coryza on different alternate days. \*Prevents recurrence of mucous polypi which bleed easily. \*Polypi, pain at root of nose and frequent acrid fluent coryza (also locally).

(*Subjective*).—Pain at root in afternoon, with sneezing and tingling like coryza. \*Coryza or acute catarrh, sneezing, acrid discharges, nostrils sore and pain in nasal bones, catarrhal headache, throat dry, sore, raw, burning as if scalded, much soreness of palate and pharynx, < on right, taste and smell lost, catarrhal deafness, vertigo, susceptibility to odors which occasionally cause faintness (*Ambrosia*. = beginning in posterior nares, gradually moving to bridge and frontal sinuses, pain in bridge as if bones ulcerated). \*Hay fever, hyperæmia (sometimes causing faintness), nose and throat dry, irritated, burning as if scalded, fluent excoriating coryza < in right side. \*Acute catarrh of frontal sinuses, severe headache, puffy swelling of turbinatids \*(*Aur. mur.* = occasionally curative when *sang.* fails).

(*Discharge*).—Fluent coryza with frequent sneezing (*Ailanthus* and *Cepa*. Acrid watery coryza (*Ammon mur.* and *Arum. tri.*). \*Cold or influenza when throat symptoms predominate.

(*Olfaction*).—Smell and taste lost (probably from cutting off olfactory regions, by swelling of soft tissues. \*Hyperosmia.

**Naso-pharynx and Pharynx.**—(*Objective*). \*Hemorrhagic or ulcerative pharyngitis. \*Nocturnal attacks dyspnoea, caused by elongation of uvula.

(*Subjective*).—Swollen sensation with pain, < on right and < by swallowing. Rawness in mouth and throat with dysphagia at 12.30 P. M. Tickling in ear, with hacking cough and headache. Dryness in afternoon *with dry, teas-*

*ing, hacking cough.* \*Acute catarrh, very red, soreness of roof mouth and pharynx as if scalded and would crack, not > by drink, < on right, pain extends to ear and chest, with burning in stomach, nausea and vomiting. \*Rheumatism of palate after influenza. \*Influenza with similar symptoms as acute catarrh of pharynx above.

**Larynx and Trachea.**—(*Objective*).—\*Aphonia. \*Acute oedema of glottis, great dyspnœa, respiration sawing or rasping, voice lost, dry and harsh cough, scanty glairy expectoration, < lying down (*Rumex*). Acute laryngitis. \*Traumatic croup. \*Inflammation accompanying fracture or dislocation.

(*Subjective*).—Dyspnœa with sighing, especially in morning. \*Dryness with the swelling of the larynx.

(*Cough*).—*Hacking c.*; *evening after lying down, from tickling in throat* (*Rumex*; *Puls.*; *Hyos.*, *Con.*) *Dry c. with tickling in throat pit, crawling and pain under upper half sternum.* *Dry c.* waking patient, < by sitting up, or *discharging flatus upward or downward.* \*Croup with whistling *c.* \*Pertussis < at night with diarrhea.

**Characteristics and Concomitants.**—Vertigo in cold weather and on lying down. Headache spreads from occiput over vertex, settling over right eye, right supra-orbital neuralgia > only by pressing head tightly on floor; < by motion and noise, car-sick-headache.

\*Tongue white and feels scalded with acute pharyngitis.

Circumscribed redness of cheek, neuralgia in upper jaw extending to eye, nose, ear, neck, or parietal region, shooting bursting pain, must kneel down and press head tightly to floor (probable central sinusitis, or mechanical pressure of turbinal varix).

\*Vomiting, burning in stomach, and headache with acute pharyngitis. Gleet. Vaginal flatus.

#### SANGUINARIA NITRATE.

By the bulk of prescribers this preparation is more generally used than the former upon same indications—it is very similar in action. Its principal sphere, and where it



gives almost universal satisfaction, is in the \*soft, soggy vascular or varicose hypertrophy of the turbinated bodies (those temporarily very amenable to cocaine locally), it has reduced \*papillomata in any location in respiratory tract; \*tumors of uvula; \*follicular laryngitis; and is Dr. Ivins' sheet anchor in follicular pharyngitis, membrane swollen and bright red, marked burning, stinging, with yellow or even bloody expectoration.

## SEPIA.

Will frequently benefit a \*chronic nasal catarrh of dry variety or \*ozena, usually accompanied by \*naso-pharyngeal catarrh when following symptoms are present: gnawing and pressure on bridge of nose with discharge of yellowish-green crusts anteriorly, fetid lumps of same posteriorly, occasionally gagging and vomiting accompanied by goneness in stomach, especially, if in females suffering from uterine or menstrual disorders or about the climacteric (*Asaf.*; *Puls.*; *Psor.*; *Natr. mur.* = thick, yellowish green discharge. *Marum verum* = large irregular green clinkers); \*chronic laryngeal catarrh, irritating, rather spasmodic cough, aphonia, < before midnight; \*aphonia in non-hysterical women, reflex from uterine disease, \*whooping cough, irritation from abdomen, violent retching, generally salty greenish-yellow expectoration which relieves, frequent desire to eat, < before midnight.

## SILICEA.

**Nares.**—(*Objective*).—\*Hay fever. \*Phlegmonous rhinitis, or \*septal abscess. \*Inflammation from foreign bodies. \*Hematoma. \*Cysts. \*Osteomata. \*Scrofula. \*Antral empyema.

(*Subjective*).—Smarting, painful scab deep in right nostril. Bruised soreness in back. Drawing in root and right malar bone. Itching. Sneezing, or ineffectual efforts to do so.

(*Discharge*).—Coryza, alternate dry or fluent. Profuse mucous discharge, without coryza. \*Ozena, principally

affecting submucous connective tissue and periosteum; inveterate ulceration; discharge thin or thick, purulent and corroding, or acrid; herpetic eruption around nose and lips; thick, green, fetid post-nasal discharge, especially if involves Eustachian tube.

(*Epistaxis*).—E. from slight irritation, with dryness.

**Naso-pharynx and Pharynx.**—(*Objective*).—\**Tonsillitis*, threatening suppuration or to promote resolution after evacuation.

\*Deep gangrenous ulcers, especially on tonsils.

\*Retropharyngeal abscess. \*Scrofulous pharyngitis.

\*Fibromata. \*Malignant tumors.

(*Subjective*).—Swelling, hyperæsthesia of and drawing pains in submaxillary gland, with soreness of internal throat on swallowing. Soreness or sticking, with pain on swallowing, even on touch, principally left. (*Lach.* = membrane darker.) Sensation lump on left side on swallowing (*Ign.*).

(*Discharge*).—Hawking of balls of greenish-yellow, offensive mucus.

**Larynx and Trachea.**—(*Objective*).—\*Malignant tumors.

\*Abscess or wounds. \*Fibromata. \*Adenomata. \*Perichondritis or chondritis, with sinus chronically discharging pus. \*Sequelæ of smallpox. Hoarseness, with or without tickling in larynx, etc.

(*Discharge*).—*Violent c.* on lying down in bed, with thick, purulent, yellow expectoration occasionally vomited. Expectoration of lump of yellow mucus, with c. in morn. and forenoon, and sore pain in trachea and chest (*Calc. c.*). Expectoration, which makes water turbid, and offensive odor to that which sinks to bottom. Purulent expectoration from trachea.

(*Cough*).—C. at first from tickling in throat (larynx), gradually coming from lower down till came from chest and shook abdomen; during day sudden, explosive, without expectoration, < eve. Fatiguing c. in eve., in bed, with rattling of mucus. C. from nightly tickling in pharynx. C., even to vomiting, with anxious sweat at night, necessi-

tating rising from bed (*Phos.*). \*C. in sickly children, with night sweats.

**Characteristics and Concomitants.**—Scrofulous constitution ; sanguino-lymphatic temperament.

Melancholic ; mental exertions fatigue easily.

Headache from nape to vertex, > by warmth ; eruption on occiput ; sour sweat.

Temporary deafness, terminating with loud crack, < at full moon ; oversensitiveness to noise.

Bad taste in morn. ; sensation hair on tongue.

\*Herpetic eruption around nostrils and on lips, with ozena ; \*painful swelling of submaxillary glands.

Sour eructations after eating ; vomiting after drinks.

Inactivity of rectum ; stool hard, large, partly expelled, then slips back.

Red sand in urine.

Profuse acrid, milky leucorrhœa.

Sweat, especially on feet when offensive.

Injuries to skin heal poorly ; unhealthy nails.

Aggravation in open air.

#### SPIGELIA.

The only condition mentioned in "Allen's Handbook" as being cured by this drug, except, of course, the neuralgic and heart symptoms, is a \**nasal catarrh*, with dryness and *stoppage anteriorly and discharge through posterior nares only* ; mucus at one time white, at another yellow ; we have often verified this, and think it should be more frequently thought of. \*Neuralgia and hyperæsthesia of nares.

#### SPONGIA

almost exclusively acts on the larynx and lower down ; \*hypertrophy of lingual tonsil being only condition in which we find it curative above ; \*acute laryngitis, with harsh, croupy cough, hoarseness, spasmodic dyspnœa, especially when rousing from sleep ; sensation of plug in larynx, which is sensitive to touch externally ; stinging and burning in pharynx and larynx ; cough < by turning head, and >



by eating or drinking (*Caust.* and *Cupr. ac.* = croupy cough > by drinking cold water); \*in *membranous croup* it is one of our mainstays, although lately being considerably supplanted by the individual use of two of its constituents, iod. and brom.; *membrane confined to larynx*, respiration continuously embarrassed, or *sawing sound during remission of cough* from diminution of laryngeal lumen by membrane, < *before midnight, in later stage* (while *Acon.* in first or febrile stage. *Iod.* = when fever still continues high, after first acute symptoms. *Brom.* = if nervous symptoms are in ascendancy, or spurious spasmodic croup); \*oedematous laryngitis; \*chronic subglottic laryngitis, with chronic hoarseness, especially if voice give out on talking or singing (*Arg. nit.* and *Phos.*); \*dry, suffocative cough, caused by pressure on windpipe by aneurism or enlarged bronchial glands; \*occasionally beneficial in pertussis.

## STANNUM.

The mucosa in and in immediate vicinity of larynx is the field of action of this drug; \*pharyngeal catarrh, discharge tenacious, often causing vomiting or expectoration of *hard lumps which fly from mouth on hawking*, these come from pyriform sinuses; \*aphonia from mental emotion or fatigue (*Cocc.*; *Natr. m.*; *Phos.*); \*tuberculous ulceration of cords, dirty appearance of mucosa, constant short irritating cough; \*in laryngeal catarrh, acute or chronic, I have made several cures when accompanied by the sudden expulsion of gray pellets of mucus, hoarseness on beginning to sing, with weakness and emptiness in chest, so must constantly stop to take deep breath, scraping irritation to cough on breathing, as if from mucus in the trachea with expectoration of offensive sweet taste (*Calc. c.* = *sweet. Kali. bi.* = *salt*); cough causes soreness in chest and trachea; cough is deep, shattering, paroxysmal, causing weakness in chest and pain in epigastrium (*Dros.*); inclination to cough before midnight with scanty expectoration.

## SULPHUR.

**Nares.**—(*Objective*).—Swelling of tip, shining redness, pain, and internal ulceration. \*Glanders. \*Scrofula. \*Lupus. \*Inflammation from foreign bodies. \*Osteomata.

(*Subjective*).—*Itching of nostrils with burning as if sore.* Itching external, < on margin with swollen sensation. Burning in septum. *Dryness* (*Lyco.*; *Natr. mur.*) Dryness in forenoon, in open air with swollen sensation. *Sneezing in eve and morn.* Sneezing always relieves head. Stoppage.

(*Discharge*).—Coryza with chilliness and cough. Coryza, discharge acrid and watery at one time, then dryness and stiffness, then discharge of thick mucus, etc.

*Offensive odor of mucus blown from nose* (*Puls.*). \*Ozena, thick bloody mucus, feels dry, stiff, or parchment-like, but principally as an intercurrent. \*Chronic blenorrhœa, dropping of yellow, glutinous, strong-smelling liquid, morn-ing and evening, without coryza.

(*Epistaxis*).—\*E. associated with chronic vertigo. Blow-ing of blood. (*Olfaction*).—\*Parosmia. Odor of old of-fensive mucus. \*Anosmia.

**Naso-pharynx and Pharynx.**—(*Objective*).—\*Acute membranous pharyngitis and diphtheria, pharyngeal mucosa dark red and painful, false membrane confined to pharynx, not on fauces or tonsils, tedious cases in psoric individuals. \*Hemorrhages. \*Quinsy, slow resolution after evacuation. \*Tonsilitis hypertrophica with harsh dry scaly skin, and early morning diarrhea. \*Leprosy.

(*Subjective*).—Swelling of tonsils with redness and sore-ness, stitches extending to ear (*Apis.*; *Hepar.*; *Nitr. ac.*), cough, dyspnœa, and sleeplessness. Swelling of parotids with stitches. Sticking in submaxillary gland with pain. *Stitches on swallowing.* Pain as from swelling of palate on swallowing. Pain or soreness especially on empty swallowing, with swelling of cervical glands. Spasmodic contraction at middle of pharynx, food will not go down. Sensation of hard ball rise and close pharynx, and take

away breath (*Ign.*; *Sil.*, = sensation lump on left side). Rawness, or roughness of fauces and uvula. Scraping and irritation, with hoarseness causing cough < in morn. Burning. Dryness with burning on swallowing, with hoarseness, exciting cough. Dry at night.

(*Discharge.*)—*Hawking and clearing with scraping* (*Nitr. ac.*). \*Scrofula. \*Chronic catarrh.

**Larynx and Trachea.**—(*Objective.*)—\*Voice rough, deep, aphonic, talking fatigues, follows well after caust.; from suppression of eruption, < morn. \*Lupus. \*Leprosy. \*Syphilis of doubtful diagnosis, may arouse latent condition. \*Adenoma.

(*Subjective.*)—Drawing at times with dryness. *Dyspnœa* with pressure and anxiety in chest, at night when lying, especially if on back. *Dyspnœa* or short respiration when walking or even talking much (*Phos.*). \*Chronic asthma, paroxysms in fore part night, with burning in chest.

(*Discharge.*)—\*Catarrhal sequelæ of smallpox.

(*Cough.*)—C. shooting in chest. (*Acon.*; *Bry.*, *Ran. bulb.*; *Squilla*, *Sticta. pulm.* C. from rawness or roughness in larynx (*Phos.*, *Puls.*)

C. on going to sleep with heat in head and eyes and cold hands. C. at night only waking him. C. with pain under sternum, and stitching in chest (*Caust. and Rumex.* = c. with soreness under sternum). \*C. usually dry, < in eve before sleep or night and lying down (*Calc. c.* = loss in day and dry at night. *Ars. a.*, *Hyos.*, and *Puls.* = c. lying down, > sitting up). \*Burning of flowers of sulphur is said to kill the contagium of pertussis.

**Characteristics or Concomitants.**—King of anti-sporics—or rather the disengorger of stagnation in venous capillaries: adapted to lean stoop-shouldered persons.

Restless; great haste in whatever doing.

\*Chronic vertigo accompanied by epistaxis; burning on vertex.

Blepharitis marginalis; scrofulous affections of eyes.

Deafness with roaring, itching, and dampness in ears.

Tongue white with red tip and edges; breath malodorous after eating; saliva tastes salt.



Lips dry, rough, and cracked; swelling and inflammation of nose, lips, and face; herpes at corner of mouth.

\*Submaxillary swelling.

Weak and hungry at 11 A. M.; sour eructations; regurgitation of food or drink; aversion to meat; milk disagrees; burning in stomach.

Sudden early morning diarrhea; occasional constipation with frequent unsuccessful effort to stool; \*diarrhea accompanying hypertrophy of tonsils.

Non-specific urethritis or irritable urethra; acrid, burning, thin leucorrhœa.

Pain in chest from overexertion.

\*Harsh, dry, scaly skin accompanying hypertrophy of tonsils; \*suppression of eruption followed by aphonia; itching with burning continuing after scratching.

> By moderate motion.

#### THUJA.

The curative action of this drug is almost entirely restricted to new or malignant growths; \*wartlike or angiomatic growth on uvula; \*polypi in nares or in chordæ vocales accompanied by hemorrhage; \*papillomata in nares and larynx have been reduced in size by internal and external administration; \*sarcomata and carcinomata in nares, naso-pharynx, or pharynx of fungoid or cauliflower shape; \*lupus of nares in larynx, if complicated with syphilis or if ulcerated (*Kali i.; nitr. ac.*); \*leprosy of pharynx or larynx; \*ozena with profuse thick green mucus, pus, or blood and hard crusts from olfactory fissure, possibly discharge from frontal or ethmoidal sinuses; \*short interrupted convulsive cough from teasing, dryness in larynx on rising in morn. or lying down in eve. (*Phos.*) or immediately after eating; in anterior nares ulceration covered with scab (*Aur. mur.; Nitr. ac.*); dryness and sensitiveness in upper nose extending to frontal sinuses.

#### WYETHIA.

The sphere of this drug is in the naso-pharynx and pharynx with two exceptions. Dr. Lippincott reports cure of

nasal polypi, \*talking and singing causes tendency to hoarseness, throat hot and dry (*Bell.* and *Phos.*); \*dry asthma. In both chronic catarrh and the acute and chronic follicular diseases of pharynx, etc., the symptoms are (objective) \*mucosa is thickened, dark red especially in folliculitis and later tendency to atrophy; (subjective) sensitive, feels swollen or sensation of lump in throat (*Phyto.*; *Graph.*); prickling dry burning and constant desire to swallow to relieve the dryness, but it does not.

## A PECULIAR INJURY TO THE INFERIOR RECTUS.

BY G. MAXWELL CHRISTINE, A. M., M. D., PHILADELPHIA, PA.

THE following case is believed to be sufficiently unique and interesting to warrant a report.

A young lady, while arranging her toilet, caught her eye on a sharp projecting portion of a wall gas fixture, tearing the tendon of the inferior rectus muscle of the left eye from its insertion in the sclera. The conjunctiva was ripped from one canthus to the other, and the torn muscle and tendon literally lay over the lid. The eyeball thus released, revolved upward, so that when the patient was directed to look straight forward, the axis of the left eye assumed an upward angle of about  $45^{\circ}$  with the axis of the right eye. The accident happened late at night, and to keep inflammation down until morning I employed compresses of diluted witch-hazel.

The next day I cocainized the eye, and endeavored to stitch the torn tendon to the sclera; but so much of the episcleral tissue was torn away that it was impossible to stitch the end of the muscle close enough to its original point of insertion to bring the axis of the eyeball on a plane with the axis of the other eye. I explained this fact to the patient and stated that, even after the operation, the eye would to some extent look upward, to correct which would subsequently require another operation, or the use of a strong prism. I then stitched the tendon with fine silk to such of the episcleral tissue as had been left by the accident, and sewed up the conjunctiva with silk.

In fastening the muscle I took the precaution to include in the stitches the conjunctiva over the muscle, and to take within the upper turn of three of the stitches a very narrow strip of con-



junctiva which had been left beneath the cornea, and which very fortunately remained intact long enough after the operation to permit union.

Proper asepsis enabled me to conduct the case to a perfect healing without a trace of suppuration.

One month after the accident measurement of refraction showed O. D. to be normal, but in O. S. there was hypermetropic astigmatism. The diplopia was corrected by a prism over the injured eye, base down, of  $15^{\circ}$ . This prism, added to the refractive error, gave for distance immediate relief to the asthenopic symptoms, but the patient found difficulty in reading or in looking strongly downward.

The patient has now worn her correction over O. S. and a plain glass over O. D., for several months, and gets along very well for distance, but still finds difficulty in reading or sewing.

In two or three months I expect, in order to correct the diplopia, to advance the inferior rectus, at least as soon as I can get the patient's consent, against which at the present time, her natural nervousness operates.

The case is interesting largely because of the nature of the accident; the injury being confined to the inferior rectus, the conjunctiva, and so much of the episcleral tissue as served to imbed the inserting end of the muscle. The cornea and the lids were left intact, and at no time was there any active inflammation of any of the ocular structures.

Since the operation, I have thought that to make up for the want of tissue in the proper bed of insertion of the rectus, to which I could stitch it, thus securing a harmony of position and function between the superior and inferior recti of the two eyes, I might have done better work and saved my patient several months of practical crippling of her eyes for near work, by clipping off a portion of the torn muscle at a length approximating the amount necessary to the required shortening. I believe, however, that I acted judiciously in not doing so, and wisely trusted to the more ready union of the normal end of the muscle with the tissue from which it was torn. Owing to the nervous-

ness of the patient, it would have been difficult to approximate with anything like certainty. Moreover I was fearful of making too much tension and thus delaying union.

The promptness with which the healing took place and the present absence of any scar or depression at the site of injury encourage me in the opinion that I might not have been so successful had I operated otherwise than I did, and that I fulfilled my duty in leaving proper approximation to a secondary operation.

## MATERIA MEDICA AND THERAPEUTICS OF THE EYE.

BY CHAS. C. BOYLE, M. D., NEW YORK CITY.

**PHYSOSTIGMA.**—Film over the eyes; blurring of sight; followed by dull pain over and between the eyes.

Pain after using the eyes, with *muscæ volitantes*, flashes of light, and twitching of the lids.

Intolerable pain over both orbits; cannot raise the eyelids.

Intense painful pressure in vertex and temples; pressure in vertex extending over to the occiput.

Pain extending from occiput through the eyes.

Twitching of the eyelids, contraction of the pupil, spasm of the ciliary muscle (*Jab.*).

Continued drawing, twisting sensation in the eyes.

Pain in the eyeballs.

Eyes sore and pain when moving from side to side (*Bry.*, *Kalmia*, *Spig.*).

Shooting in right eye, with drawing in it (*Spig.*).

Pain in the eyeball and frontal bone, running obliquely into the temporal bone.

Pain in the posterior part of the orbit extending back into the brain, preventing reading and causing nausea.

Vision blurred, with dull pain over and between the eyes.

Twitching of lids, combined with spasm of the ciliary muscle; twitching around the eyes; patient cannot read without much pain; nausea; frontal headache, worse from light.



*Clinical.*—I have found it useful in relieving the pain and distress in the eyes in high degrees of myopia, especially where there is posterior staphyloma, and in spasm of accommodation, accompanied by twitching of eyelids and nausea. It has proven curative in paresis of the accommodation following diphtheria.

PHYTOLACCA.—Double vision, with vertigo and headache.

Feeling as of sand in the eyes, with soreness and burning.

Burning and smarting in the eye and eyelids with profuse lachrymation > open air.

Painful pressure on forehead and upper part of head.

Shooting pain from left eye to vertex.

Sharp pain goes through eyeball on reading or writing.

Dull aching pain in eye < from motion, light, or exercise.

Rheumatic pains in and about the eyes.

Pressure around eyes as if they were too large.

*Clinical.*—It is an excellent remedy for any inflammatory condition of the eye where there is intense swelling of the conjunctiva, chemosis dark red; especially if we have a threatening panophthalmitis; later in the course of the disease we have pus in the anterior chamber.

In orbital cellulitis the cellular tissue is infiltrated, hard and unyielding to touch, eyelids swollen and of a bluish red color; chemosis very marked; eyeball pushed forward.

In these cases use a solution locally and give the drug internally.

PLUMBUM.—Cloudiness before the eyes; dimness of vision; sudden loss of sight or transient amaurosis.

Eyeball feels too large.

*Clinical.*—It has been used in optic neuritis. Optic papillæ swollen; outlines hazy.

In threatening atrophy of the optic nerve I have seen some benefit from the use of this remedy.

PRUNUS SPINOSA.—Pain in right eyeball, as if inner portion of the eye would be torn out; ciliary neuralgia; pain in the eyeball as if crushed, or pain as if pressed

asunder; sharp shooting pain extending through eye back into brain, or above the eye, extending into and around it, or over corresponding side of the head; commences behind ears and shoots forward to the eye, < by motion, > by rest; pains occasionally periodic in character, and may be worse at night.

Pain in head, pressing from within outward; extending from beneath right temporal to frontal bone; < from external pressure.

*Clinical.*—It is a great remedy in iritis with the characteristic pains as above; in any form of eye trouble with the characteristic crushing pain.

It has been used beneficially in the various forms of choroiditis, also in glaucoma.

PSORINUM.—Great photophobia; walks with eyes bent upon the ground; scurfy eruption on face or head.

Lids spasmodically closed, intense photophobia and profuse flow of tears; pustular eruption on face or head.

*Clinical.*—I have found great benefit from this remedy in scrofulous affections of the eyes in children, especially in pustular inflammations of the cornea or conjunctiva, accompanied with marked redness, photophobia, and lachrymation. These cases generally have an accompanying eruption on head or face, or there may be a foul-smelling discharge from the ear.

PULSATILLA.—Dryness of eyes and lids, with sensation as if darkened by mucus which ought to be wiped away (*Alumina, Crocus, Euphr.*).

Dimness of sight, with lachrymation in the open air.

Dizzy obscuration of vision after sitting, on rising and beginning to walk about, or on going into a warm room.

During menses it becomes black before the eyes < in a warm room.

*Clinical.*—In amblyopia from suppression of any bloody discharge; from gastric derangement, with heart disease.

In accommodative asthenopia, with aching in eyes after sewing; from general prostration.

In all inflammatory conditions of the conjunctiva

accompanied by a bland discharge, generally aggravated in a warm room, but lachrymation worse in open air.

In pustular inflammations of the cornea, accompanied by characteristic symptoms of the drug.

Often prescribed in colored children with good results, for the same reasons that I would give to a blonde of the white race, and it works just as well if not better.

This is one of the best remedies for a catarrhal condition of the lachrymal duct and sac; if given in the early stage, it will cure nearly every case without any other treatment. The bland yellow discharge is a good symptom to go by, if we find nothing else.

It has cured a case of neuro-retinitis due to suppression of menses.

**RHODODENDRON.**—Burning pain in the eyes; when reading or writing there is a feeling of heat in them.

Shooting in right eye from within outward. Ciliary neuralgia < before a storm.

*Clinical.*—I use it in all eye troubles, especially if rheumatic, where symptoms are worse before a storm, and you can depend upon its giving some relief if it does not effect a cure. I have found it beneficial for the pains of iritis, when the usual conditions of aggravation of the drug were present.

**RHUS TOX.**—Vision obscured, as if a veil were before the eyes.

Lids red, swollen, and œdematous, especially the upper, and spasmodically closed; profuse gushing of tears on opening lids.

Conjunctiva swollen and œdematous, with muco-purulent discharge.

*Clinical.*—This remedy is frequently indicated in rheumatic iritis, irido-choroiditis, panophthalmitis, catarrhal and purulent conjunctivitis, phlyctenular and pustular conjunctivitis and keratitis, in orbital cellulitis, tenonitis, and in fact it has been used in almost every disease that the eye is subject to, but more especially the external troubles which are accompanied by a marked chemosis of conjunc-



tiva, and profuse lachrymation, besides having other symptoms of the drug and the well-known aggravation during wet, stormy weather.

RUTA GRAVEOLENS.—Pain in right eye like a pressure, with obscuration of vision, as if one had looked too long and intently.

Weary pain while reading; fatigue after reading too long; eyes feel strained.

Heat in the eyes in the evening by artificial light, with aching while reading.

*Clinical.*—It is an excellent remedy in muscular weakness of the eyes < by overuse.

SENEGA.—Aching over orbits; eyes tremble and water when looking at an object intently; eyes weak and watery when reading.

Eyes pain as if they were pressed out, as if eyeballs were being expanded.

Dryness with smarting as from soap. Lachymation in open air; sensation as if threads were hanging before the eyes, < right eye.

Pain in the orbits; in the eyeballs, with drawing and diminished vision. Weakness of the eyes when reading; letters run together, with lachymation on exerting the eyes too much; flickering on reading or writing, obliging one to wipe the eyes, which aggravates burning and lachrymation.

*Clinical.*—It has been used to promote absorption of lens after rupture or wound of lens capsule. I have used it in these cases, and it apparently hastened absorption of the lens substance. It is useful in paralytic affections of the muscle of the eye, especially the oculo-motor and the trochlearis. It is also frequently of service in asthenopia muscularis.

SEPIA.—Vanishing of sight, vision impeded by fiery zig-zags or sparks; flickering before eyes when looking into light; green halo around candlelight. (*Phos.*)

Dimness of vision as if gauze with black spots before the eyes.

Shooting pains from within outward, especially over the

left eye, with nausea. Redness of the eyes in the morning on waking, with burning, smarting pressure and lachrymation. Pain in right eye as from sand, worse on pressing the lids together and on rubbing the eye.

Soreness in the eyes in the evening; after walking in cold wind, < by gaslight and attempting to read, with roughness and burning.

Bruised feeling; smarting in right eye in the evening, with inclination of lids to close despite one's will.

Fatigue from reading and writing, with sore pain in inner canthus.

Heaviness, with tendency to keep lids closed.

Burning in the eyes in the morning, with weakness of the lids and dryness.

Inflammation of the eyes, with swelling, redness, and burning pain. Heavy pain in the eyes on waking. Heat in margin of lids, with dryness. Vision vanishes during menses < by lying down.

Obscuration of vision, dependent on hepatic derangement.

*Clinical.*—In affections of the eye, especially in females, dependent upon derangement of hepatic and sexual systems. In asthenopic symptoms in females, especially, if, with other symptoms, it has the morning and evening aggravation.

*SILICEA.*—Redness of the eye with inflammation, smarting, burning, and profuse lachrymation. Swelling in the region of the lachrymal sac.

Pain as if eyelids were dry and full of sand, in the morning.

Letters run together when reading or writing (*Natr. mur.*, *Ruta.*, *Senega*).

Dimness of vision after suppressed foot sweat.

Obscuration of vision.

Momentary loss of sight, with uterine affections.

Tearing, shooting, or, at times, throbbing stinging pains in the eyes, coming in paroxysms.

Ciliary neuralgia, especially over the right eye; darting

pains through the eyes and head upon exposure to any draft of air or just before a storm.

*Clinical.*—It is used in ulcers of the cornea, also in all suppurative conditions of the eye, generally following the hepar stage, when the pus becomes thin.

In affection of the lachrymal canal, especially if there is caries of the bone.

In ciliary neuralgia, where the patient is relieved by wrapping up the head ; also from warmth.

SPIGELIA.—Burrowing stitch in the middle of the eye and in the inner canthus, pressing upper lid downward.

Stitches in the left side of the head and out of the left eye.

Pain in the eyes on moving them ; feeling as if the eyes were too large for their orbits (*Acon.*, *Calad.*, *Opium*, *Paris*, *Phos. ac.*, *Plumb.*) Sticking in the right eyeball < by moving it.

Pain in the left orbit, near malar bone ; bone sore to touch.

Neuralgia ; pain centers above or below left eye < from cold, damp, rainy weather. Vision dim, sensation as if feathers or hairs were on the lashes < by rubbing the eyes. Ciliary neuralgia, the pains radiate in every direction.

Sharp sticking pains through eyeballs back into the head, or radiating from a fixed point.

*Clinical.*—Used in eye troubles in which there are the characteristic sharp, sticking, radiating pains, especially if they are of a rheumatic nature, as in iritis.

SULPHUR.—Redness of the eyes during the day ; itching in the evening. Sticking in the right eye ; burning and rubbing, dry sensation, as from sand beneath the lids (*Ars.*, *Caust.*, *Hepar*).

Sensation of a foreign body in the eyes. (*Calc. c.*, *Caust.*, *Hepar*, *Ignat.*, *Sep.*, *Sil.*)

Feeling of sand in the eyes in the morning when waking, with raw pain on rubbing them. Shooting pains in the eyes, and cutting stitches, as from a knife.

Biting in the eye in the evening, with lachrymation.



Smarting in the eyes in the evening with inclination to rub them.

*Clinical.*—This is used in almost every variety of disease of the eyes, but I have found it particularly useful in scrofulous affection in children, which showed itself in the form of phlyctenules, pustules, and ulcers.

Also in asthenopic troubles where they complain of burning, smarting, scratching, and dryness in eyes after using them.

ZINCUM MET.—Inflammation of eyes during menses.

Pain in eyes as from sand, < in the evening and at night; inner canthus red and swollen; inflammation and redness of the conjunctiva.

Burning in the eyes in the afternoon; in the evening with dryness and pressure. Persistent redness, especially in the inner angle < in the evening and in the open air.

*Clinical.*—This remedy is generally used in conjunctival inflammation of a subacute character, especially located at inner canthus, as in pterygium. I have seen benefit from it in the treatment of this trouble. In these cases I generally use a solution of the sulphate locally.

## CLINICAL CASES.

BY B. H. B. SLEGHT, A. M., M. D., NEWARK, N. J.

MISS —, school-teacher, has for some weeks noticed a spot on inner side of cornea, which has been gradually encroaching upon it. Is distressed over its appearance and the possibility of loss of sight.

Some bodily symptoms seemed to indicate rhus tox., which she received in various potencies but without any promise of cure.

A cure speedily followed, however, and in a few months the offending "spot" was no more. A disposition on the part of the pterygium to return, after about six months, was met successfully with the same medicine. No return in three years.

*Polypus of Nose, Calc. Carb.*—Boy of five, fair-haired; bland coryza for several weeks. Later a pale red tumor was seen inside, which now is plainly visible, projecting from left nostril, obstructing it completely. A diagnosis of submucous polypus was made, and an *attempt* at removal by forceps, which was unsuccessful. Calc. carb. was prescribed and the growth rapidly disappeared, and has not since returned.

## ABSTRACTS FROM CURRENT LITERATURE.

Vacher, L.—Extraction of the Transparent Lens as a Prophylactic Measure in Progressive Myopia of High Degree and in Detachment of the Retina.—*Annales d'Oculistique*, July, 1896.

The writer gives a resumé of fourteen cases in which he performed the above operation, in all of which the result was favorable. He considers that the operation has a tendency to prevent detachment of the retina if undertaken early enough. In his own words, "after a certain age this operation should be undertaken with great precaution. The sooner progressive myopia is attacked, the better will be the results." He formulates the following conclusions as indicated by his experience :

"1. Extraction of the transparent lens is a grave operation which should only be performed with great prudence and with the most vigorous antiseptic precautions.

"2. Myopia progressing rapidly between the ages of twelve and sixteen, may be operated upon after the age of twelve, if there is a large staphyloma and if the number of dioptries of myopia exceeds the number of years of the patient.

"3. Only one eye should be operated upon and that the more seriously affected. A second operation should not be undertaken until later, and that on the express request of the patient, if the myopia continues to progress.

"4. After thirty years, myopes of more than fifteen dioptries being particularly exposed to detachment of the retina, one should not hesitate to extract the transparent lens when the visual acuity permits of it."

DEADY.

Adams, Jno. L.—A Case of Thrombosis of the Lateral Sinus, with Recovery after Operation.—*New York Med. Journ.*, August 29, 1896.

Patient, female, aged twenty-four. Always enjoyed good health



until five years previously, when left ear became affected as a result of a severe cold. In a few days an otorrhœa came on, lasting for a year, since which time there had been tinnitus in left ear and dizziness whenever the least pressure was made on the external auditory canal. With these exceptions she had had no disease of any kind until six weeks previous to present consultation, when she again took a severe cold and during a paroxysm of coughing was seized with a sharp pain in the same ear. Four days later she consulted a well-known aural surgeon and under his advice syringed the ear with a warm solution of boric acid, three times a day, under which treatment the inflammation apparently subsided. Four weeks later the pain recurred, when the same surgeon advised an operation. This being declined, the patient was told to put hot onions in her ear, which she did. After two days a discharge appeared, but the pain persisted. Still under the same physician, the ear was syringed with a warm solution of boric acid, three days later a leech was applied, and afterward hot fomentations were used, despite all of which the pain grew steadily worse, all of the symptoms were aggravated, and a swelling appeared behind the ear. During the next day or two she had fainting spells, chills, vomiting, prostration, and the temperature rose to  $104^{\circ}$  Fahrenheit. The pain was now confined to the ear and the frontal portion of head, and "felt as though someone was twisting a knife around in her head." No profuse perspiration, and no involvement of the throat nor of the eyes. At this time she consulted the author and on the same afternoon was operated at the New York Eye and Ear Infirmary. On admission there was intense pain over the left mastoid, which was swollen and very sensitive to pressure, especially at the tip. The swelling extended down the neck, but no cord-like condition of the jugular vein could be made out. Whitish purulent masses were found in the external canal, and the posterior wall was swollen and boggy. The membrana tympani was nearly destroyed, only the upper segment remaining. The head of the malleus was carious. The mucous membrane of the tympanum was œdematous and bathed in pus. There was great prostration, pulse rapid and weak, temperature  $103.4^{\circ}$  F. Chilly sensation and vomiting persisted. Examination of the eyes revealed a slight retinal hyperæmia. Under thorough antiseptic precautions, the patient being etherized, the operation was begun by a vertical linear incision about one-

quarter inch behind the posterior border of the external osseous meatus, extending from the tip of the mastoid to one-half inch above the root of the zygoma ; from the upper extremity of this, another incision was made directly backward about three-quarters of an inch. These incisions penetrated the periosteum, which was elevated with the soft tissues, and the outer bony table of the mastoid was removed with the chisel, when it was found that the posterior osseous wall of the external canal, together with the intercellular partition of the mastoid, had been destroyed, and that the cavity was filled with pus and cholesteatomatous material. This cavity and that of the middle ear were curetted and thoroughly cleansed with a bichloride solution 1-5000, after which the lateral sinus was uncovered by extending the opening of the bone backward and removing the inner table with a chisel and rongeur forceps. As this plate was removed a small amount of pus escaped from the sigmoid groove about the sinus. The sinus was then exposed for fully an inch to facilitate the operation and to cleanse it. After curetting away a few adhesions and washing it thoroughly with a bichloride solution 1-5000, the sinus seemed to pulsate, to be of normal consistence, and the walls did not appear to be thickened. The introduction of a sterilized hypodermic needle, however, revealed the fact that it contained no blood. It was then laid open with a scalpel for about three-quarters of an inch and found to contain a cord-like mass which proved to be a dry clot. A small curette was then passed upward and backward toward the torcular herophili, and this clot was removed until fluid blood appeared. The contents below were removed for as great a distance as the curette could be introduced, but no fluid blood could be obtained from this side. The sinus was then irrigated with normal salt solution and packed with iodoform gauze, the upper part of the wound was sutured, and the usual antiseptic dressing applied. Next day the temperature rose to 104° and the patient was quite weak and coughed considerably. Examination of the chest revealed nothing. On the following morning the temperature fell to 101°. During the next twenty days the patient steadily progressed toward recovery, at the end of which time the temperature had remained normal for a week. One month later the wound had entirely healed and the patient was well. DEADY.

**Richey, O. S.—The Fads and Fashions of Surgery.—**  
*Ann. of Oph. and Otol.*, April, 1896.

The paper is strongly condemnatory of many of the operations upon the throat and nose which have recently come into vogue as the fad or fashion of the day.

The author claims that adenoids are very often removed when, if left alone, they would right themselves. On the other hand their removal may give rise to ear disease, and often leaves the naso-pharynx far too large and covered with hard nodules, collecting secretion and producing irritation or even ulceration.

Tonsillotomy is necessary in emergency, but its underlying cause of hypertrophied tonsils is constitutional, and the treatment should be in this line. Locally, the use of kali. permang. to increase oxidation, and nitrate of silver to increase tissue metamorphosis, is of benefit when applied to the crypts.

The writer also believes the cause of many hypertrophied inferior turbinatids is not in the turbinatids themselves, but is due to interference with the circulation in the upper meatus, and if this be corrected by a gentle application of cocaine to the upper meatus followed by a two to ten per cent. solution of silver nitrate, the lower turbinatids will soon resume their normal condition.

PEARSALL.

**Kayser, Rich.—On the So-called Pharyngo-Therapy.**  
—*Therapeut. Monatschr.*, May, 1896.

The writer points out the ideas upon which this method is based, viz.: That disease germs enter the body through the inspired air, and owing to the peculiar structure of the upper air passages they are almost all caught and held in these localities; hence, in order to prevent and treat infectious diseases, it is only necessary to thoroughly wash out all the germs from these cavities. The author notes that the germs of various diseases are found in the healthy nasal cavities, which goes to prove that such germs are harmless there, and it is only those that are carried further by the current of air that cause trouble; that measles is the only infectious disease that begins in the nose and pharynx; showing that, while primary infection of the nose and throat is possible, it is not probable. The author also notes the difficulty of cleansing the nasal cavities so that they appear clean to the naked eye, much less with the microscope; and calls attention to



the dangers which attend nasal douching, especially the danger of forcing infectious matter into the accessory sinuses and Eustachian tube, or out of the nose into the throat, stomach, etc.

PEARSALL.

**Boeckmann, Edouard.—Operative Treatment of Pterygium.**—*Mississippi Valley Medical Assn., American Medico-Surgical Bulletin*, vol. x. No. 16.

The technique of the operation is described as follows: A crescentic piece, having its concavity directed toward the cornea, is excised from the growth about five lines from its head. This area is then curetted thoroughly down to the sclerotic; the head is then dissected off, after which a stitch is inserted, drawing the cut end of the remaining portion of the growth together, while the curetted portion is allowed to granulate and form a cicatrix.

This operation is considered, by the author, to yield results superior to that of any other.

RITCHIE.

**Jaboulay.—Division of the Cervical Sympathetic in Cases of Exophthalmic Goiter.**—*Lyon Médical*, No. 22, 1896.

The author has practiced the above-mentioned operation in two cases of exophthalmic goiter, it being followed by an improvement in the proptosis. He divides both nerves, but adds that the result is not always symmetric, as one nerve, being more active than its fellow of the opposite side, seems to exert a more marked effect.

RITCHIE.

**Darier, A.—New Method of Keratotomy for Iridectomy or Cataract Extraction, in case of Complete Obliteration of the Anterior Chamber.**—*Annales d'Oculistique*, June, 1896.

The author's method is as follows: The lid elevator in place, the eye is drawn downward by an assistant holding the fixation forceps near the lower margin of the cornea. The operator takes a lance-shaped knife in either hand, and holding them inversely to each other in the sclero-corneal limbus, passes them into the anterior chamber, the one on the right side, the other on the left, a little above the horizontal diameter of the cornea. As soon as the point of each knife has

penetrated the cornea, before touching the iris, they are to be withdrawn and a curved cataract knife, sharp on the convex edge and with a button at the end, entered at one of the incisions and coming out at the other, completing a section measuring about one-third the circumference of the cornea. The author states that the operation is very easy of accomplishment.

DEADY.

**Bacon, Gorham.—A Case of Brain Abscess, Secondary to Chronic Suppurative Otitis Media and Presenting Unusual Symptoms, Operation, Recovery.**—*New York Med. Journal*, August 15, 1896.

Patient a college graduate, thirty-two years of age, strong constitution, first seen December 5, 1895. The history is that of a chronic suppurative otitis media (left side), of at least fifteen years' duration, a result of measles, and practically without treatment during the above period. Of late, patient has at times acted strangely and has complained occasionally of some pain in his head, not sufficient to interfere with his business as an editor. Four days ago had a very severe pain in the left ear, and discharge was very profuse. This was soon followed by intense headache and marked pain in the ear, the temperature rising to 104° F. Later, a general convulsion lasting twenty minutes with violent muscular twitching and frothing at the mouth. He was unconscious during the convulsion and for half an hour afterward. In the evening of the same day he was removed to the New York Eye and Ear Infirmary, where preparations for the operation were made at once. At this time the temperature was 100° F., pulse 104, respiration 26; patient perfectly conscious, but complained of severe headache. The auditory canal contained foul smelling pus and granulations. Under ether, a long incision was made over the mastoid process, down to the bone and close to the auricle. The bone was very dense and the mastoid antrum was reached with much difficulty by means of chisels and gouges; the lateral sinus being out of its usual position was slightly injured, resulting in copious hemorrhage, which necessitated plugging the sinus with iodoform gauze. The external meatus was thoroughly curetted, the wound washed with a bichloride solution and packed with gauze, after the upper angle had been brought together with sutures.

The patient rallied well, and on the following day, December 6, the temperature was normal. He had complete facial paralysis from injury to the nerve during the operation. The improvement, however, was temporary, and on the third day following the patient had a severe chill followed by profuse perspiration and severe headache. He was markedly aphasic. The aphasia was chiefly of conduction, resulting in verbal amnesia. Temperature in the evening,  $104.8^{\circ}$  F.

Next day, December 10, the temperature was lower, the patient less confused and more comfortable; fundus of each eye normal. In consultation with Drs. Starr and Gruening, it was decided to explore the lateral sinus, and if necessary to remove a button over the temporo-sphenoidal lobe. 3 A. M., temperature  $101.9^{\circ}$  F.; 11 A. M.,  $101.2^{\circ}$  F.; 12 midnight,  $102^{\circ}$  F.

Second operation. Under ether the lateral sinus was again exposed and found to be pulsating, the hypodermic needle was inserted in several directions, always withdrawing blood; the original incision over the mastoid was carried an inch and a half upward and a horizontal incision was made forward for the same distance. A button of bone was removed with a trephine, three-quarters inch in diameter, the center pin of the trephine being placed at a point two inches above the center of the external meatus. The dura was exposed, and was found slightly bulging and pulsating. The opening in the skull was enlarged with a rongeur forceps in a direction downward and backward. In separating the thickened dura from the tympanic roof to which it was adherent, pus was seen to exude. There was found, with a probe, an opening at this point in the dura, and half an ounce of pus escaped. A Y-shaped incision was made in the dura and the operator's little finger was introduced its whole length in a direction inward, upward, and backward, finding a good sized abscess cavity but without any sac. More pus and broken down brain tissue, of a very offensive odor, came away. The bridge of bone between the opening made, with the trephine and the antrum, was then chisled away, to secure perfect drainage; the external wound was irrigated with boric acid solution; the abscess cavity was not washed out, but this and the external wound were loosely packed with iodoform gauze and bandages applied.

3 A. M., Temperature,  $97.6^{\circ}$  F.; 6 A. M.,  $102.6^{\circ}$  F.; 9 A. M.,  $99^{\circ}$  F.; 4 P. M.,  $98.4^{\circ}$  F.



Next day uneventful, temperature varying from  $99.8^{\circ}$  to  $101^{\circ}$  F. On the following day, there being more or less elevation of temperature during the early morning, the packing was removed from the abscess cavity for the first time; the pus was most offensive. The abscess cavity was repacked with iodoform gauze. The patient complained of severe pain afterward and was very drowsy, and on waking after deep sleep was very confused. At 7 P. M. he had a tonic convulsion, followed by marked headache, at which time he did not seem to recognize anyone. Highest temperature,  $103^{\circ}$  F. In the following twenty-four hours, he had three severe convulsions and two lighter ones. At the dressing of the wound about 5 drams of thin pus escaped and the patient had a slight convulsion with unconsciousness for at least two minutes. After this time the temperature rapidly dropped to normal and the patient made steady improvement, the aphasia, however, persisting, though in a lessened degree. The facial paralysis was treated with the constant current daily.

During the month of January, 1896, there was steady improvement in all symptoms and the aphasia practically disappeared. The external wound was almost entirely healed and the patient discharged from the hospital on the 29th. DEADY.

**Bond.—A Case of Uncontrollable, Intermittent Laryngeal Cry.**—*Journ. of Laryngol.*, August, 1896.

The case was one of a boy of eleven years, who began suddenly at night to utter a loud cry. The cry occurred at irregular intervals for six months, disappearing after a short sojourn in the country. A few months after his return to the city there was a recurrence of the trouble, which again began during the night. Until recently the cry persisted during the night. The cry occurs at intervals of from twelve seconds to a minute and a half, and is sharp, explosive, and quite loud. It is accompanied by violent action of the diaphragm, and does not occur during the examination of the larynx. The patient has adenoid hypertrophy, and appears dull and stupid. There is also choreic movement of the hands and arms, although there is no history of chorea in the family. Mr. Bond thinks that removal of the adenoids, and a change to the country, with the administration of arsenic, will relieve the whole trouble. PEARSALL.

**Birkett, H. S. (Montreal).—A Case of Perichondritis of the Left Crico-Arytenoid Joint from an Unusual Cause.**—*Journ of Laryngol.*, August, 1896.

The case is of interest in that it occurred during the course of an inflammatory rheumatism in a young man who had contracted gonorrhea. Simultaneously with the onset of the rheumatism in the left ankle, knee, and shoulder joints there appeared a soreness of the *left* side of the throat, accompanied by difficulty in swallowing.

PEARSALL.

**Vollert.—Eucaine in Ophthalmic Practice.**—*Münch. med. Woch.*, No. 22, 1896.

As a result of a clinical study of the drug in question, Vollert finds that the anæsthetic effect is not destroyed by boiling. In the experiments a five per cent. solution was employed. The conjunctival irritation was more marked than that following the use of cocaine, being more protracted, and renewed at each instillation.

Its anæsthetic effect was manifested in from two to three minutes, and persisted from eight to twelve minutes. The tension of the eye was diminished and dilatation of the pupil and paralysis of the accommodation were present, although in a less marked degree than after the use of cocaine. Desquamation of the corneal epithelium was more pronounced.

RITCHIE.

**Belt, E. Oliver.—Formalin in the Treatment of Purulent Ophthalmia.**—*Medical News*, No. 1234.

The writer reports a case of purulent ophthalmia occurring in a young man of fifteen years, which had progressed under the usual treatment employed, until the right cornea had ulcerated at its lower quadrant, through which there was an extensive protrusion of the iris. The left eye presented considerable chemosis, with sloughing of the lower segment of the cornea. The treatment was changed; a solution of formalin, 1-1500, replacing the bichloride solution (1-4000) which had been used, previously, to cleanse the eye. This was used hourly. Once a day the sloughing corneæ were touched with a 1-60 solution of the same. On the second day after adopting this treatment the slough had disappeared from the left cornea, leaving an ulcer

with a clean, clear base. On the third day there was considerable improvement noticed in the right eye, and the chemosis was less marked in both. On the tenth day the left cornea was clear, no chemosis, and but little discharge. At the expiration of a month the vision in this eye was  $\frac{2}{20}$ , with a perfectly clear cornea.

The right eye recovered with an opacity of the cornea, which was not so dense but that it permitted the counting of fingers at six inches, while the iris had returned to its normal position, leaving a circular pupil and no evidences of prolapse except a slight pigmentation of the cornea.

RITCHIE.

**Yearsley, MacLeod.—Aural Reflexes.**—*Medical Times and Hospital Gazette*, London, May 23, and June 6, 1896.

Among other cases quoted in this article may be noted the following : Patient, A. M.—A sailor, æt. thirty-five, suffering from a persistent and distressing hiccough, occurring on an average twice a minute, with pain in the epigastrium, nausea, and occasional vomiting. The condition had lasted a week. On the ninth day after the first consultation, being sixteen days since the attack began, attention was drawn to the ears by a feeling of dullness on the left side of the head. Hearing for speech was good ; and for tuning fork over the mastoid, normal. No accurate test of hearing power was made. Meatus externus normal, membrana tympani retracted. Politzeration caused the hiccough to cease immediately, and there was no return.

E. G., æt. three, suffering from purulent discharge from the right ear, from measles, which was being treated under surgical direction by syringing with boric acid solution. The mother had just finished this operation when the child fainted and her efforts to resuscitate him proving unavailing, a physician was sent for. On his arrival a half hour later, he found profound coma, slow irregular respiration, rapid pulse, lividity of lips, cold extremities and dilated pupils. Child revived under the action of stimulants ; examination of the ear showed no sign of caries.

Patient, a young unmarried woman, complained of constant nausea and absolute inability to retain any kind of nourishment, everything being vomited immediately. No cause could be discovered and no treatment relieved her. Two weeks later she complained of singing tinnitus in the left ear. An examination revealed an impacted cerumen. This was removed by syringing,



and before the process was finished the nausea disappeared, and no further trouble was experienced.

J. C., aged thirty-two, suffering with otitis media suppurativa chronica, of the right ear, with granulations. Whenever the free exit of pus was prevented by the growth of granular tissue, he complained of a bitter taste in the back of his mouth. Re-establishment of the discharge caused the symptom to disappear.

The author also quotes cases of epilepsy, nystagmus, strabismus, paralysis of the superior oblique, myosis, and mydriasis, as results of aural irritation.

DEADY.

**Bull, Chas. Stedman.—The Course and Prognosis of Orbital Tumors, as Influenced by Surgical Operations for their Removal.**—*New York Med. Journal*, August 29, 1896.

In an interesting article upon this subject, the author formulates the following conclusions :

1. The prognosis of all forms of malignant orbital tumors, whether primary or secondary, is unfavorable, and if the tumor is primarily in one or more of the deep facial bones or their sinuses, the prognosis is positively bad.

2. Except in the case of encapsulated tumors of the orbit, surgical interference is almost invariably followed by a return of the tumor, and the growth of the secondary tumor is more rapid than that of the primary lesion. With each succeeding operation, the period of quiescence in the return of the tumor grows shorter, and the rapidity of the growth increases.

3. The patient's family and in certain cases the patient himself should, in the beginning, be told of the serious nature of the trouble, and be warned that complete removal of all the diseased germs is a well-nigh hopeless task. The burden of the decision as to surgical interference must rest upon the shoulders of the patient.

4. Repeated operations in these cases undoubtedly shorten the life of the patient. While it is therefore our duty to operate in all cases in order to relieve severe or unbearable pain, we should be slow to operate merely for the sake of relieving temporary physical disfigurement or deformity, especially if we are convinced that by so doing we shorten the life of the patient, even if that shortened life is rendered more bearable to him.

DEADY.

**Morax, V.—Ocular Disturbances Observed in a Case of Epithelioma of the Sphenoidal Sinus.**—*Annales d'Oculistique*, June, 1896.

The author gives the following list of symptoms with conditions found at the autopsy, in one of the cases mentioned in this article. Progressive diminution of vision, then sudden blindness without lesion of the fundus of the eye; continuous headaches; later slight optic neuritis, then atrophy of the disk; in the beginning no naso-pharyngeal disturbance; later purulent discharge from the nose and appearance of pedunculated tumors on the pituitary membrane; paralysis of the ocular motor nerves; ptosis; exophthalmos from intra-orbital tumors. Death one year after the commencement of the affection from broncho-pneumonia.

*Autopsy.*—Primary epithelioma of the sphenoidal sinus with dilatation of the sinus. Invasion by the neoplasm of the body of the sphenoid, of the optic nerves, and of the chiasm. Neoplastic prolongations into the orbit, the maxillary sinuses, and the ethmoidal grooves. Invasion of the orbital surface and then frontal convolutions. Broncho-pneumonia. DEADY.

**Otto, C.—Remarks on Erysipelas of the Larynx.**—*Bibliothek für Lager.*, April, 1896; *Journ. of Lar.*, August, 1896.

The case cited occurred in a healthy man, thirty-seven years of age, who had taken cold three weeks previously. A few days (three) before going to the hospital he became hoarse and had a good deal of difficulty in breathing. These symptoms increased until the attacks became very severe and frequent. His condition, on admission to the hospital, was as follows: Face cyanosed, stridulous breathing, general collapse. Temperature 100.6°. Pharynx normal. There was considerable œdema of ary-epiglottic folds and epiglottis. Tracheotomy was performed, with relief of the dyspnœa. In thirty-six hours the temperature rose to 103.5°, followed by collapse but no dyspnœa. Death soon occurred, preceded by clonic spasms of the lower extremities. Post-mortem showed the ary-epiglottic folds to be swollen, œdematous, and ecchymosed; the swelling extending to the posterior pharyngeal wall and to the epiglottis and base of tongue. Scattered about in the swollen tissue were small abscesses, containing yellow pus. There were also endocarditis and myocarditis and parenchymatous degeneration of the liver and kidneys. There was no history of

erysipelatous infection, but from the appearance of the larynx, the remittent character of the disease, and the post-mortem examination, the author believes the case to be one of erysipelas laryngis.

PEARSALL.

**Joal.—Laryngeal Congestions of Nasal Origin.**—*Rev. de Laryngol.*, April, 1896.

The paper is written to draw attention more forcibly to the nasal origin of laryngeal congestions ; a point neglected in a previous paper by the same author entitled, "Laryngeal Fluxions." The nasal causes of laryngeal congestion are classified as follows :  
 1. Nasal obstruction, more or less complete. 2. Erection of the cavernous tissue, causing reflex action. 3. Propagation of vasomotor disturbances, originating in the nose. 4. Nasal obstruction, causing lowering of the respiratory capacity. 5. Insufficiency (functional) of the nasal cavities as a resonator. Several cases of laryngeal congestion are given, in which the laryngeal symptoms could be easily aroused by irritation of the trigeminal and olfactory nerve-endings in the nasal mucous membrane. A case is also cited of a young singer in whom the high notes were lost, the middle register difficult, hoarseness, etc.; and the lung capacity was diminished very considerably. The whole train of symptoms was relieved by the removal of a nasal spur. The writer believes these troubles to be due to the unusual amount of work thrown on the larynx, resulting in fatigue, leading to congestion, increased susceptibility, chronic laryngitis, nodes, etc.

PEARSALL.

**Williams, Charles H.—A Case of Extraction of a Bit of Copper from the Vitreous, where X-Rays Helped to Locate the Metal.**—*Boston Med. and Surg. Jour.*, vol. cxxv. No. 7.

The patient, a young man of seventeen years, exploded a Flobert rifle cartridge by placing it in a vise and striking it with a hammer. On exploding, a piece struck his left eye, inflicting a wound in the cornea, which extended two-thirds of the distance across it in a vertical direction.

The anterior chamber was emptied, and the pupil was occluded by a mass of swollen lens matter. There was no pain, and but little redness of the eye. Vision was reduced to perception of light, which was good in all but the lower part of the field.



The query immediately presented itself as to the presence of the foreign body within the eye. Owing to the material of which it was composed—copper—the electromagnet was of service neither as an aid to diagnosis nor to the extraction of the particle, should its presence within the eyeball be demonstrated, while the condition of the eye precluded the use of the ophthalmoscope.

Two radiographs were made by Dr. Francis H. Williams and Professor Norton, at the Massachusetts Institute of Technology ; the apparatus used being a Wimshurst machine of twelve plates, each twenty-six inches in diameter, and which gave an almost continuous series of sparks, the rays being given off from one electrode, so that a better defined picture was obtained than could have been possible with the usual form of alternating current and induction coils, in which first one electrode and then the other becomes the source of the rays.

The patient was laid on the table with the injured eye close to the plate-holder, resting on it as on a pillow, the Crookes tube being placed so that the rays passed partly across the bridge of the nose and partly through the thin nasal and orbital bones. The exposure lasted ten minutes, and, on developing the plate, there was what appeared to be a foreign body situated a little back of the center of the eyeball. The position of the tube was changed slightly and a second radiograph taken, which, on development, failed to show any trace of the foreign body ; but this was explained later by the fact that the piece of metal was found to be a thin strip, and the rays fell upon its edge.

The patient was etherized and a conjunctival flap made between the external and inferior recti muscles ; the sclera was then incised about three-sixteenths of an inch from, and parallel with the edge of the cornea, and a pair of curved iridectomy forceps introduced, which grasped a hard substance well back in the posterior portion of the vitreous, which, on extraction, proved to be a thin, nearly straight piece of copper, one-fourth of an inch long, and an eighth of an inch wide, and the thickness of an ordinary cartridge shell.

The conjunctival wound was closed, and healing took place without any untoward symptoms ; the patient returning to his home at the expiration of eight days.

Five weeks after the original injury, however, the eye was struck by a piece of wire, which traumatism was followed by red-

ness and tenderness of the eye, accompanied by flashes of light before the sound eye, which phenomena necessitated the removal of the offending member. RITCHIE.

**Pooley, Thos. R.—On the Value of the Ophthalmoscope as an Aid to the Diagnosis of Cerebral Disease in Purulent Affections of the Middle Ear.—*Medical Record*, No. 1345.**

Among others, Pooley draws the following deductions, after a review of the literature on the subject :

1. That the ophthalmoscope is of value in arriving at the diagnosis of the presence of cerebral disease—in some instances by confirming the evidence which is given by other symptoms ; in others, by being the principal if not the only reliable evidence of the existence of brain disease.

2. That the subsidence of the optic neuritis, after operation which gives a favorable turn to the ear disease, is shown by the recovery of the eye and the restoration to normal vision.

3. That the intra-ocular end of the nerve is never inflamed when the disease remains limited to the middle ear and mastoid, but is a certain evidence of brain disease. If, therefore, optic neuritis is found, the diagnosis of extension to the brain is certain, no matter whether other evidence exists or not.

4. That the form of optic neuritis which exists is always of the kind seen in affections of the brain, viz., choked disk ; but this may vary in degree from a simple venous stasis, hyperæmia of the disk, œdema of the disk and retina, to the most pronounced case of choked disk.

5. That the eye trouble and impairment of vision are most marked on the side corresponding to the affected ear.

6. That optic neuritis occurs more frequently in cases of chronic than in those of acute suppuration.

7. That the list of brain lesions from suppuration of the middle ear in which optic neuritis has been observed, verified by autopsies, embraces nearly if not all those observed ; *i. e.*, abscess of the cerebrum and cerebellum, meningitis, and sinus thrombosis.

8. That optic neuritis occurring in a case of chronic suppuration of the middle ear, with a history of long-standing otorrhœa, is, by inference, very apt to be due to cerebral abscess, although all the lesions already enumerated may exist in the same case.

9. That the condition of œdema of the optic disk is a sufficient indication for opening the mastoid (*Andrews*).

10. That the recession of the ocular symptoms is an indication for stopping syringing and draining, and allowing the opening in the mastoid to close, not waiting for entire cessation of the discharge (*Knapp*).

11. That the existence of optic neuritis is to be taken as an indication for exploration of the brain for intra-cranial disease, only in connection with other symptoms which would render so grave an operation justifiable. Its existence, however, serves to make the presence of intra-cranial disease more certain.

RITCHIE.

### **Grandclement.—True Iritis and Uveitis of the Iris.—**

*Lyon Médical*, tom. xxxii. No. 34.

He insists upon the necessity of recognizing these two forms of affections of the iris as distinct diseases both from a histological as well as from a clinical standpoint.

The former is more frequent among the male sex, frequently affects but one eye, is more violent in its manifestations, and its duration is from one to two months. Causes : syphilis, rheumatism, and gout. Atropine and drugs of this class are of great benefit in this affection.

Uveitis is observed exclusively among women, always affects both eyes, lasts for years with slight periodic exacerbations continuing five or six days ; cause unknown. Iridectomy is the only effective local treatment.

Differential diagnosis during the attack may be made by observing the condition of the anterior layers of the iris. In iritis there is always a marked discoloration which in uveitis is not perceptible ; in the former affection the pain and hyperæmia are violent, in the latter the pain is slight if any, and the hyperæmia not pronounced ; in iritis the pupil dilates imperfectly, even in the absence of adhesions ; in uveitis it dilates freely, except where it is bound down by old adhesions.

RITCHIE.

### **Belt, E. Oliver.—Sponge Grafting in the Orbit for Support of Artificial Eye.—*Ophthalmic Record*, No. 61.**

In order to overcome the sunken appearance which is attendant upon the wearing of an artificial eye after enucleation by



the prevailing method, and to obviate the dangers following Mule's operation, viz., breakage of the glass vitreous sphere, and the risk of sympathetic ophthalmia, Belt has practiced sponge grafting in the orbit. He has performed the operation in five cases with fairly good success, in two of which cases the eyes were enucleated for panophthalmitis. He experienced some trouble in that the union of the conjunctiva was not firm enough to prevent a few of the stitches from breaking or cutting out. To obviate this he has proposed a modification of the operation as originally performed by him, which was as follows :

The eyeball is removed as in the ordinary operation for enucleation, care being taken to preserve as much of the conjunctiva as possible by cutting close to the cornea. After the hemorrhage has been arrested, the socket is flushed out with a 1-1000 solution of formalin followed by a sterilized salt solution. A globe of fine soft sponge about three-fourths the size of the eyeball, having been previously rendered sterile by immersion in a five per cent. solution of formalin and rinsed in the salt solution, is then introduced into the socket. The conjunctiva is brought together by a purse-string rat-tail suture, and the lids are then closed with compress and bandage. In a few weeks the sponge is filled with new tissue, which in time becomes solid flesh, giving a well filled orbit. The sponge fibers are apparently absorbed. This is the method originally pursued. The modification proposed consists in uniting the opposing recti muscles with a rat-tail suture previous to closing the conjunctiva, thus relieving the strain on the latter and securing good motion of the stump.

RITCHIE.

**Garel.—Hereditary Syphilis Simulating Adenoid Vegetations.**—*Rev. hebdomadaire de Lar.*, xvii., 1896.

The writer of this article reports two cases of hereditary syphilis in children, involving the naso-pharynx, which so closely resembled adenoid vegetations that one was operated; the operation being soon followed by a perforation of the soft palate, and later by the discharge of bony sequestra from the nares. The condition was relieved by the iodide. In the second case operation was only refused on account of the condition of the heart. Here also a perforation of the palate soon occurred. [The lesson that may be learned from these cases seems to be that conditions

presenting the symptoms of post-nasal obstructions are not of necessity adenoid vegetations.] PEARSALL.

**Zandy.—Tuberculosis of the Alveolar Processes.—**  
*Arch. für klin. Chir.*, lii. No. 1.

The deductions reached by the author are as follows: The disease seems more apt to develop between the ages of fifteen and thirty, and is more frequently encountered in men than in women. Syphilis forms no barrier to the tuberculous affection.

Carious teeth are the most important factor in the ætiology of alveolar tuberculosis; carious teeth, and wounds of the alveolar process following extraction, giving the opportunity for the entrance of the tubercle bacilli.

The symptoms manifest themselves first as a swelling of the gum, which bleeds easily and becomes soft. Then comes ulceration accompanied by pale unhealthy granulation, falling out of the teeth, necrosis of the bone, fetid odor, excessive salivation, but *very little pain*.

Although tuberculosis of the alveolar process is supposed to be a very rare condition, the author has collected thirty-seven cases from medical literature which have been reported during the past quarter of a century. PEARSALL.

**Costa.—The Advantage of Warm Cocaine Solutions.**  
—*Semaine Méd.*, May, 1896.

The author enumerates the advantages of warm cocaine solutions as follows: (1) anæsthesia is more intense; (2) the effect is more rapid; (3) the effect lasts longer; (4) the anæsthesia extends further.

Owing to these results it is claimed that the solutions used may be reduced one-half in strength without interfering with their efficiency, and thus the danger of drug intoxication is also reduced. PEARSALL.

**Germani.—Ichthyol in Affections of the Eye.—***Gazetta Degli Ospedali.*—*British Medical Journal*.

Germani finds an ointment composed of lanolin six parts, ichthyol one part, to be very efficacious in blepharitis ciliaris; it curing many cases that resisted the yellow oxide of mercury oint-

ment. He finds that phlyctenular conjunctivitis, as well as the simple catarrhal form, are benefited by collyria containing from one to three per cent. of ichthyol.

RITCHIE.

**Hamilton.—Removal of a Foreign Body from the Bronchus.**—*Australasian Med. Gazette*, April, 1896.

A little girl, five years old, began to cry while she had a seed from the cone of a stone pine in her mouth, and the forcible inspiration drew this into the larynx. Examination showed nothing in the throat, but upon crying there was dyspnœa and stridulous breathing. There was little or no air entering the right lung. Two days later a low tracheotomy was performed, and the edges of the incision held wide apart by sutures. The child was then held head downward, and the foreign body coughed out through the tracheal opening. A rapid and uneventful recovery followed.

PEARSALL.

**Erselberg.—Resection and Suture of the Trachea.**—*Deutsche med. Wochen.*, No. 22, 1896.

The case described by the author occurred in a man, thirty-six years of age, who had attempted suicide. The trachea, which was cut through, was united by sutures. Owing to repeated attacks of dyspnœa it was found necessary to insert a tracheotomy tube. Every time the tube was removed a severe attack of dyspnœa resulted, due, as it was afterward discovered, to an obliteration of the lumen of the trachea. To overcome this difficulty a small portion (two centimeters) of the tube was resected and the cut ends sutured together. Union took place kindly, and in four days the tracheotomy tube was removed. There was no return of the dyspnœa.

PEARSALL.

**Munger. C. E.—New Remedies in the Treatment of Diseases of the Upper Air Passages.**—*Journ. of Lar.*, September, 1896.

Of the drugs mentioned some are new, others old, but presented in a new form. The report was based on the record of cases in the author's clinic during the past year.

*Argentarium.*—Catarrhal and purulent rhinitis. A five to ten per cent. solution applied to the mucous membrane not oftener



than once in two days. A weaker (half to two per cent.) solution to be used daily at home.

*Acetanilid.*—The pure powder, applied to wounded surfaces after nasal operations, facilitated healing and diminished the post-operative frontal headache and neuralgic pain. Persistent hemorrhage was apt to occur when the drug was used on septal wounds. Otherwise no bad effects followed its use.

*Tannigen.*—It was found necessary to use this drug in the proportion of ten grains to one dram to the ounce. Its action appeared to be stimulating rather than astringent.

*Formalin.*—In a half to two per cent. solution, this drug was found to be an effective deodorizer and disinfectant, particularly in specific ulceration.

*Pyrozone.*—In a three per cent. solution it was found valuable as a disinfectant and hemostatic after operations. The twenty-five per cent. solution was most useful in pharyngitis and mycosis of the pharynx.

*Ortho-mono-chlorphenol.*—A twenty-five per cent. solution should be used only by the physician. The best results were obtained in ulcerations of the septum or turbinatids; and especially in atrophic rhinitis.

PEARSALL.

## BOOK REVIEW.

DISEASES OF THE EYE. A Handbook of Ophthalmic Practice, for Students and Practitioners. By G. E. DE SCHWEINITZ, A. M., M. D., Professor of Ophthalmology in the Jefferson Medical College ; Professor of Diseases of the Eye in the Philadelphia Polyclinic, etc. etc. With 256 illustrations and two chromolithographic plates ; second edition, thoroughly revised. Philadelphia : W. B. Saunders, 1896, pp. 679.

The second edition of this work comes to us in a new dress and much improved. While the same plan has been followed as in the first edition, much of the matter has been rewritten, notably in the case of the chapter on operations, and a number of new topics have been touched upon, among which are Filamentous Keratitis, Bloodstaining of the Cornea, Essential Phthisis Bulbi, Foreign Bodies in the Lens, Retinitis Circinata, Symmetrical Changes in the Macula Lutea in Infancy, Hyaline Bodies in the Papilla, Subconjunctival Injections of Germicides, Infiltration—Anæsthesia, Sterilization of Collyria, Ophthalmia Nodosa, Electric Ophthalmia, and Angeoid Streaks in the Retina. Descriptions of the methods of using the ophthalmometer of Javal and Schiötz, and the tropometer of Stevens, are also included.

Among other improvements we note that the old term ophthalmia, has been dropped and is replaced by the more modern and scientific conjunctivitis. The description of the macula lutea has been revised and brought up to date. The author takes a rather pessimistic view of the subconjunctival injection of germicides ; claiming that even in choroiditis they are of little use, notwithstanding Darier's testimony to their efficiency in this disease. We also note the addition of scopolamine to the list of mydriatics. In one particular this edition is a marked improvement over its predecessor. We refer to the plates interspersed throughout its pages. These have been increased in number by about forty, are much less sketchy, and altogether of a higher type of the illustrator's art. While this volume is scarcely intended for the specialist in ophthalmology, it yet fills an important place in the field of ocular literature, containing short, succinct descriptions of almost every condition found in more pretentious textbooks, written in a most readable style and conveying a large amount of information for the space occupied.

## GENERAL INDEX TO VOL. VIII.

---

- A Bacteriological Study of the Throat in One Hundred and Seventeen Cases of Scarlet Fever, Abs., G. Lemoine, 271
- Abduction of the Vocal Cords in the Cerebral Cortex, Representation of, Abs., Russell, 168
- Abscess, Brain, Secondary to Chronic Suppurative Otitis Media and Presenting Unusual Symptoms, Operation, Abs., Gorham Bacon, 351
- Abscess, Retro-Pharyngeal, Incision of, According to Antiseptic Principles; From the Neck, Abs., Willy Meyer, 264
- Abscess, Retro-Pharyngeal, of Infancy and Childhood, Abs., Henry Koplik, 272
- A Case, Robt. G. Reed, 320
- A Case of Brain Abscess, Secondary to Chronic Suppurative Otitis Media, and Presenting Unusual Symptoms, Operation, Abs., Gorham Bacon, 351
- A Case of Extraction of a Bit of Copper from the Vitreous, where X-Rays Helped to Locate the Metal, Abs., Chas. H. Williams, 358
- A Case of Fatal Pharyngeal Hemorrhage, Abs., G. E. Brewer, 260
- A Case of Ligation of Post-Auricular Vessels for the Relief of Tinnitus Aurium, Howard P. Bellows, 187
- A Case of Papilloma of the Larynx, Cured by Applications of Absolute Alcohol, Abs., Delevan, 260
- A Case of Perichondritis of the Left Crico-Arytenoid Joint from an Unusual Cause, Abs., H. S. Birkett, 354
- A Case of Suppurative Ethmoid Disease, Followed by Invasion of the Sphenoidal Sinus, Abscess of the Brain, and Death, Abs. F. H. Bosworth, 168
- A Case of Thrombosis of the Lateral Sinus, with Recovery after Operation, Abs., Jno. L. Adams, 346
- A Case of Uncontrollable Intermittent Laryngeal Cry., Abs., Bond, 353
- Accommodation and Convergence, Robt. G. Reed, 117
- Accommodation in the Blind Eye, Abs., R. Greeff, 259
- Acid, Salicylic, The Effect of, upon the Mucous Membrane of the Respiratory Tract, Abs., Ludwig Ebstein, 271
- A Contribution to the Study of Ocular Affections and of Sinusitis of Dental Origin, Dr. Alph. Pechin, 217
- Acute Inflammation of the Middle Ear and Mastoid, Treatment of, Abs., E. B. Dench, 73
- ADAMS, JNO. L. A Case of Thrombosis of the Lateral Sinus, with Recovery after Operation, Abs., 346
- Adenoid Inflammations of the Pharyngeal Vault, William S. Pearsall, 304
- Adenoid Vegetations and Chronic Hypertrophy of the Tonsils, Torticollis Due to, Abs., A. J. Gillette, 268
- Adenoid Vegetations, Hereditary Syphilis Simulating, Abs., Garel, 362
- Advancement of the Recti Muscles, An Operation for, C. C. Boyle, 129
- Advantage, The, of Warm Cocaine Solutions, Abs., Costa, 363
- A Form of Pharyngitis Permitting the Recognition of Diabetes or Albuminuria, Abs., Garel, 272
- Albuminuria, A Form of Pharyngitis Permitting the Recognition of Diabetes or, Abs., Garel, 272
- Alcohol, Absolute, A Case of Papilloma of the Larynx Cured by Applications of, Abs., Delevan, 260
- Alveolar Processes, Tuberculosis of the, Abs., Zandy, 363
- Alveolar Sarcoma of the Optic Nerve, Abs., F. W. Ring, 86
- Amblyopia, Temporary, from Chocolate, A Case of, Abs., Casey A. Wood, 77



- Anatomy and Physiology of the Larynx, Some Points in the, Abs., C. R. Illingworth, 82
- Anatomy, Pathological, of Central and Perinuclear Cataracts, Abs., Von Hippel, 253
- Anæsthesia with Guaiacolized Oil, Abs., Laurens, 274
- Angioma, Cavernous, of the Orbit, Abs., H. Knapp, 176
- Angioma, Cystic, of the Orbit: Electrolysis, Abs., E. Valude, 85
- An Operation for Advancement of the Recti Muscles, C. C. Boyle, 129
- An Operation for Cases of Congenital Ptosis, Abs., J. Oscroft Tansley, 174
- A Novel Case of Reflex Immobility of One Pupil, Abs., Seggel, 257
- Anterior Chamber, Complete Obliteration of the, New Method Keratotomy for Iridectomy for, Cataract Extraction in case of, Abs., A. Darier, 350
- A Peculiar Injury to the Inferior Rectus, G. Maxwell Christine, 334
- Aphakia, The Treatment of High Myopia by, L. Y. Baker, 294
- A Rare Case of Syphilitic Disease of the Orbit, Abs., Mandelstamm, 262
- Arecoline, a Myotic, Abs., Dr. Lavagno, 80
- ARSLAN. Rhinitis Caseosa, Abs., 179
- Artificial Eye, Sponge Grafting in the Orbit for Support of, Abs., E. Oliver Belt, 361
- A Simple Method of Destroying the Lachrymal Sac, Abs., Durr, 259
- Asthenopia, The Neurological Aspect of, Abs., H. Gradle, 76
- Asthenopia *vs.* Diabetes. Frank D. W. Bates, 158
- A Study in Light and Refraction, W. U. Reynolds, 51
- Atrophy of the Lids, Abs., Fuchs, 258
- A Typical Case of Gumma of the Ciliary Body—With Remarks upon Syphilitic Tumors of the Anterior Portion of the Uveal Tract in General, Dr. Oswalt, 97
- Aural Reflexes, Abs., MacLeod Yearsley, 355
- Autoscopy of the Larynx and Trachea.—Its Inspection without a Mirror, Dr. Alfred Kirstein, 38
- BACON, GORHAM. A Case of Brain Abscess, Secondary to Chronic Suppurative Otitis Media and Presenting Unusual Symptoms, Operation, Abs., 351
- Bacteriological Study of the Throat in One Hundred and Seventeen Cases of Scarlet Fever, Abs., G. Lemoine, 271
- Bacteriology of Ozena, Abs., Fage, 178
- BAKER, L. Y. The Treatment of High Myopia by Aphakia, 294
- BAQUIS. Rare Phenomena in a Case of Detachment of the Retina, Abs., 85
- BARR, THOMAS. A Treatment of Intractable Suppuration of the Middle Ear, by Operation through the Mastoid, with Report of Eight Successful Cases, Abs., 80
- BATES, FRANK D. W. Asthenopia *vs.* Diabetes, 158
- BELLOWS, HOWARD P. A Case of Ligation of Post-Auricular Vessels for the Relief of Tinnitus Aurium, 187
- BELT, E. OLIVER. Formalin in the Treatment of Purulent Ophthalmia, Abs., 354
- BELT, E. OLIVER. Sponge Grafting in the Orbit for Support of Artificial Eye, Abs., 361
- BIGLER, W. H. Glaucoma, Abs., 171
- BIRKETT, H. S. A Case of Perichondritis of the Left Crico-Arytenoid Joint from an Unusual Cause, Abs., 354
- Bleeding Tumors of the Septum, A Contribution to the Etiology of, Abs., John Sendziak, 266.
- BLEYER, J. MOUNT. On the Electro-Vibration of the Turbinate Tissue, 277
- Blindness, Sudden, with Complete Recovery, Abs., B. F. Travis, 271
- BOECKMANN, EDWARD. Operative Treatment of Pterygium, Abs., 350
- BOND. A Case of Uncontrollable Intermittent Laryngeal Cry, Abs., 353
- BOOTH, J. ARTHUR. Mydriasis Cured by Hypnotism, Abs., 74
- BOSWORTH, F. H. A Case of Suppurative Ethmoid Disease, Followed by Invasion of the Sphenoidal Sinus, Abscess of the Brain, and Death, Abs., 170
- BOYLE, C. C. An Operation for the Advancement of the Recti Muscles, 129

- BOYLE, C. C. *Materia Medica and Therapeutics of the Eye*, 45, 146, 209, 337  
 Brain Abscess, A Case of, Secondary to Chronic Suppurative Otitis Media and Presenting Unusual Symptoms, Operation, Abs., Gorham Bacon, 351  
 Brain, Abscess of the, and Death, A Case of Suppurative Ethmoid Disease, Followed by Invasion of the Sphenoidal Sinus, Abs., 170  
 Brain, Endothelioma of the, Abs., Jones and Buxton, 80  
 Brain Surgery, Progress in, Von Bergmann, 75  
 BREWER, G. E. A Case of Fatal Pharyngeal Hemorrhage, Abs., 260  
 BULL, CHAS. STEDMAN. The Course and Prognosis of Orbital Tumors, as Influenced by Surgical Operations for their Removal, Abs, 356  
 BURNETT, SWAN M. Formalin in Ophthalmic Practice, Abs., 273

## BOOK REVIEWS.

- Annual of the Universal Medical Sciences, Chas. D. Sajous, 88  
 A Text-Book on Nervous Diseases, by American Authors, Francis X. Dercum, 184  
 Clinical Lectures on Diseases of the Nervous System, W. R. Gowers, 185  
 Color-Vision and Color-Blindness, J. Ellis Jennings, 182  
 Diseases of the Ear, Edw. Bradford Dench, 275  
 Diseases of the Eye, G. E. de Schweinitz (Second Edition), 364  
 Electricity in Electro-Therapeutics, Edwin J. Houston, 185  
 La Pratique des Maladies du Larynx, du Nez et des Oreilles dans les Hôpitaux de Paris, Professeur, Paul Lefert, 182  
 Les Ophtalmies du Nouveau-né, E. Valude, 183  
 New Truths in Ophthalmology, as Developed by G. C. Savage, 181  
 Skiascopy and its Practical Application to the Study of Refraction. Edw. Jackson, 94  
 Student's Aid in Ophthalmology. Gertrude A. Walker, 95  
 The Eye in its Relation to Health. Chalmer Prentice, 94  
 The Functional Examination of the Eye, Jno. Herbert Claiborne, Jr., 183  
 The Practice of Medicine. Wm. C. Goodno, 96  
 Therapeutics of the Eye, C. C. Boyle, 93  
 The Toxic Amblyopias ; Their Symptoms, Pathology, and Treatment. George E. de Schweinitz, 180  
 Traitement des Maladies des Yeux, Notions Pratiques, A. Trousseau, 183  
 Case of Detachment of the Retina, Rare Phenomena in a, Abs., Baquis, 85  
 Case of Perichondritis of the Left Crico-Arytenoid Joint from an Unusual Cause, Abs., H. S. Birkett, 354  
 Case of Temporary Amblyopia, from Chocolate, Abs., Casey A. Wood, 77  
 Case, Thrombosis of the Lateral Sinus, with Recovery after Operation, A, Abs., Jno. L. Adams, 346  
 Case of Uncontrollable Intermittent Laryngeal Cry, Abs., Bond, 353  
 Case, Unusual, of Syphilis of the Tonsil, Abs., Sendziak, 87  
 Cataract Extraction, New Method Keratotomy for Iridectomy for, in Case of Complete Obliteration of the Anterior Chamber, Abs., A. Darier, 350  
 Cataract, Extraction of, Intra-Ocular Hemorrhage after the, Two Cases. Harold Wilson, 300  
 Cataracts, Central and Perinuclear, the Pathological Anatomy of, Abs., Von Hippel, 253  
 Cataracts, Immature, Extraction of, Abs., G. E. de Schweinitz, 265  
 Cavernous Angioma of the Orbit, Abs., H. Knapp, 176  
 Cerebral Cortex, Representation of Abduction of the Vocal Cords in the, Abs., Russell, 168  
 Cerebral Disease in the Purulent Affections of the Middle Ear, On the Value of the Ophthalmoscope as an Aid to the Diagnosis of, Abs., Thos. R. Pooley, 360  
 Cervical Sympathetic, Division of the, in Cases of Exophthalmic Goiter, Abs., Jaboulay, 350  
 Chamber, Anterior, New Method Keratotomy for Iridectomy for Cataract Extraction, in case of Complete Obliteration of the, Abs., A. Darier, 350

- Chocolate, A Case of Temporary Amblyopia from, Abs., Casey A. Wood, 77
- Cholesterin Crystals Following Extraction, Abs., David Webster, 256
- CHRISTINE, G. MAXWELL. A Peculiar Injury to the Inferior Rectus, 334
- Chronic Deafness Relieved by Nasal Operation, H. F. Fisher, 214
- Chronic Glaucoma, Operating in, Abs., Priestly Smith, 171
- Chronic Laryngitis and its Treatment, Chas. E. Teets, 121
- Chronic Suppurative Otitis Media, A Case of Brain Abscess Secondary to, and Presenting Unusual Symptoms, Operation, Abs., Gorham Bacon, 351
- Ciliary Body, A Typical Case of Gumma of the, With Remarks upon Syphilitic Tumors of the Anterior Portion of the Uveal Tract, Dr. Oswalt, 97
- Cleft Palate, A New Operation for Difficult Cases of, Abs., Kraske, 178
- Clinical Cases, B. H. B. Sleight, 345
- Cocaine Solutions, Warm, The Advantage of, Abs., Costa, 363
- COSTA. The Advantage of Warm Cocaine Solutions, Abs., 363
- COLLIER, MAYO. Etiology of Nasal Obstruction, Abs., 267
- COLLINS, TREACHER. Four Cases of Bi-lateral Glioma of the Retina Cured by Enucleation of the Two Eyes, Abs., 171
- Color Audition, Hilbert, Abs., 252
- Congestions, Laryngeal, of Nasal Origin, Abs., Joal, 358
- Conjunctiva, Experimental Study of the Distribution of Liquids Injected Beneath the, Abs., Mellinger and Bossalino, 252
- Contribution to the Etiology of Bleeding Tumors of the Septum, Abs., John Sendziak, 266
- Convergence, Accommodation and, Robt. G. Reed, 117
- Copper, a Case of Extraction of a Bit of, from the Vitreous where X-Rays Helped to Locate the Metal, Abs., Chas. H. Williams, 358
- Cornea, Hydraulic Curetting of the, Abs., Santarnecchi, 84
- Cornea, The Results of Sections of the Trigeminal Nerve, with Reference to the So-Called "Trophic" Influence of the Nerve on the, Abs., Wm. Aldren Turner, 168
- Corneo-Scleral Wounds, with Prolapse of the Iris, Repair of, Abs., G. E. de Schweinitz, 266
- Crico-Arytenoid Joint, Left, A Case of Perichondritis of, from an Unusual Cause, Abs., H. S. Birkett, 354
- Cry, Laryngeal, A Case of Uncontrollable, Intermittent, Abs., Bond, 353
- Cystic Angioma of the Orbit: Electrolysis, Abs., E. Valude, 85
- Dacryocystitis, Treatment of, with Fleuorol, Abs., Duclos, 86
- DARIER, A. New Method Keratotomy for Iridectomy for Cataract Extraction in case of Complete Obliteration of the Anterior Chamber, Abs., 350
- DAVIDSON, JAMES N. Formaldehyd in Eye Disease, Abs., 173
- Deafness, Chronic, Relieved by Nasal Operation, H. F. Fisher, 214
- DELEVAN. A Case of Papilloma of the Larynx Cured by Applications of Absolute Alcohol, Abs., 260
- DENCH, E. B. Treatment of Acute Inflammation of the Middle Ear and Mastoid, Abs., 73
- Dental Origin, A Contribution to the Study of Ocular Affections and of Sinusitis of, Dr. Alph. Pechin, 217
- DE SCHWEINITZ, G. E. Extraction of Immature Cataracts, Abs., 265
- DE SCHWEINITZ, G. E. Repair of Corneo-Scleral Wounds, with Prolapse of the Iris, Abs., 266
- Detachment of the Retina, Extraction of the Transparent Lens as a Prophylactic Measure in Progressive Myopia of a High Degree and in, Abs., L. Vacher, 346
- Detachment of the Retina, Rare Phenomena in a Case of, Abs., Baquis, 85
- Deviation of the Cartilaginous Septum; Its Cure, Abs., Emil Mayer, 78
- Diabetes, Asthenopia *vs.*, Frank D. W. Bates, 158
- Diabetes or Albuminuria, A Form of Pharyngitis Permitting the Recognition of, Abs., Garel, 272
- Diagnosis of Cerebral Disease in Purulent Affections of the Middle



- Ear, On the Value of the Ophthalmoscope as an Aid to the, Abs., Thos. R. Pooley, 360  
 Diphtheria, Two Important Discoveries in the Treatment of, J. J. Fox, 200  
 Division of the Cervical Sympathetic in Cases of Exophthalmic Goiter, Abs., Jaboulay, 350  
 DOGIEL. The Nerve Terminations in Lachrymal Glands of Mammals, Abs., 72  
 DUCLOS. Treatment of Dacryocystitis with Fluorol, Abs., 86  
 DURR. A Simple Method of Destroying the Lachrymal Sac. Abs., 259  
  
 Ear, Effects on the, of Nasal Stenosis, Abs., Randall, 83  
 Ear, Materia Medica of the, Wm. E. Rounds, 27  
 Ear, Middle, and Mastoid, Treatment of Acute Inflammation of the, Abs., E. B. Dench, 73  
 Ear, Middle, Enlargement of the Faucial Tonsils in Relation to Diseases of the, Abs., Ferreri and Garbini, 79  
 Ear, Middle, Fatal Case of Malignant Disease of the, Abs., Story, 71  
 Ear, Middle, On the Value of the Ophthalmoscope as an Aid to the Diagnosis of Cerebral Disease in Purulent Affections of the, Abs., Thos. R. Pooley, 358  
 Ear, Middle, Treatment of Intractable Suppuration of, by Operation through the Mastoid, with Report of Eight Successful Cases, Abs., Thomas Barr, 80  
 EBSTEIN, LUDWIG. The Effect of Salicylic Acid upon the Mucous Membrane of the Respiratory Tract, Abs., 271  
 Effects on the Ear of Nasal Stenosis, Abs., Randall, 83  
 Electrolysis: Cystic Angioma of the Orbit, Abs., E. Valude, 85  
 Electro-Vibration of the Turbinate Tissue, J. Mount Bleyer, 277  
 Elongated Tonsils, Simulating Quinsy and Hysteria, Abs., Fenn, 84  
 Elongation of the Ocular Muscles in the Treatment of Non-Paralytic Strabismus, Abs., Panas, 258  
 Endothelioma of the Brain, Abs., Jones and Buxton, 80  
 Enlargement of the Faucial Tonsils in Relation to Diseases of the Middle Ear, Abs., Ferreri and Garbini, 79  
 Epilepsy, Reflex, of Nasal Origin, Abs., Seithoff, 177  
 Epistaxis through the Eyes, Abs., M. A. Veeder, 170  
 Epithelioma of the Sphenoidal Sinus, Ocular Disturbances Observed in a Case of, Abs., V. Morax, 357  
 Erysipelas of the Larynx, Remarks on, Abs., C. Otto, 357  
 Ethmoid Disease. A Case of Suppurative, Followed by Invasion of the Sphenoidal Sinus, Abscess of the Brain, and Death, Abs., F. H. Bosworth, 170  
 Etiology of Bleeding Tumors of the Septum, Contribution to the, Abs., John Sendziak, 266  
 Etiology of Nasal Obstruction, Abs., Mayo Collier, 267  
 Eucaïne in Ophthalmic Practice, Abs., Vollert, 354  
 EVERSBUCH. Extraction of Two Lenses Luxated into the Vitreous Body, Abs., 262  
 Exophthalmic Goiter, Division of the Cervical Sympathetic in Cases of, Abs., Jaboulay, 350  
 Exophthalmos, Intermittent, Abs., P. V. Richter, 259  
 Experimental Researches upon Infectious Diseases of the Eye. Abs., Max Perles, 263  
 Experimental Study of the Distribution of Liquids Injected Beneath the Conjunctiva, Abs., Mellinger and Bossalino, 252  
 Extraction, Cholesterin Crystals Following, Abs., David Webster, 256  
 Extraction of a Bit of Copper from the Vitreous where X-Rays Helped to Locate the Metal, Abs., Chas. H. Williams, 358  
 Extraction of Cataract, Intra-Ocular Hemorrhage After the, Two Cases. Harold Wilson, 300  
 Extraction of Immature Cataracts, Abs., G. E. de Schweinitz, 265  
 Extraction of the Transparent Lens as a Prophylactic Measure in Progressive Myopia of High Degree and in Detachment of the Retina, Abs., L. Vacher, 346  
 Extraction of Two Lenses Luxated into the Vitreous Body, Abs., Eversbuch, 262  
 Eye, Artificial, Sponge Grafting in

- the Orbit for Support of, Abs., E. Oliver Belt, 361
- Eye, Blind, Accommodation in the, Abs., R. Greeff, 259
- Eye Diseases, Formaldehyd in, Abs., James N. Davidson, 173
- Eye, Infectious Diseases of the, Experimental Researches upon, Abs., Max Perles, 263
- Eye, *Materia Medica* and Therapeutics of the, C. C. Boyle, 45, 146, 209, 337
- Fads, The, and Fashions of Surgery, Abs., O. S. Richey, 349
- FAGE. Bacteriology of Ozena, Abs., 178
- Fatal Case of Malignant Disease of the Middle Ear, Abs., Story, 71
- FENN. Elongated Tonsils, Simulating Quinsy and Hysteria, Abs., 84
- FERRERI AND GARBINI. Enlargement of the Faucial Tonsils in Relation to the Middle Ear, Abs., 79
- Fibroma of the Naso-Pharynx, J. E. Mann, 9
- FISHER, H. F. Chronic Deafness Relieved by Nasal Operation, 214
- Fluorol, Treatment of Dacryocystitis with, Abs., Duclos, 86
- Formaldehyd in Eye Disease, Abs., James N. Davidson, 173
- Formalin in Ophthalmic Practice, Abs., Swan M. Burnett, 273
- Formalin in the Treatment of Purulent Ophthalmia, Abs., E. Oliver Belt, 354
- Four Cases of Bi-lateral Glioma of the Retina Cured by Enucleation of the Two Eyes, Abs., Treacher Collins, 171
- FOX, J. J. Two Important Discoveries in the Treatment of Diphtheria, 200
- Frontal Sinus, Gunshot Wound of the, Orbital Cellulitis Produced by a, Abs., H. Davidson Schwarzhild, 255
- FUCHS. Atrophy of the Lids, Abs., 258
- Functions of the Retinal Elements and Visual Purple; the Sensitiveness of the Eye to the colors of the Spectrum, H. Parinaud, 15
- GAREL. A Form of Pharyngitis Permitting the Recognition of Diabetes or Albuminuria, Abs., 272
- GAREL. Primary Lesion of the Nasal Septum, Abs., 84
- GAREL. Hereditary Syphilis Simulating Adenoid Vegetations, Abs., 362
- GILLETTE, A. J. Torticollis Due to Adenoid Vegetations and Chronic Hypertrophy of the Tonsils, Abs., 268
- GINSBERG. Idiopathic Serous Cysts of the Iris, Abs., 255
- Glaucoma, W. H. Bigler, Abs., 171
- Glaucoma, Chronic, Operating in, Abs., Priestly Smith, 171
- Glioma of the Retina, Four Cases of Bi-lateral, Cured by Enucleation of the Two Eyes, Abs., Treacher Collins, 171
- Goiter, Exophthalmic, Division of the Cervical Sympathetic in Cases of, Abs., Jaboulay, 350
- GRADLE, H. The Neurological Aspect of Asthenopia, Abs., 76
- Grafting, Sponge, in the Orbit for Support of Artificial Eye, Abs., E. Oliver Belt, 361
- GRANDCLEMENT. True Iritis and Uveitis of the Iris, Abs., 361
- GREEFF, R. Accommodation in the Blind Eye, Abs., 259
- Guaiaicolized Oil, Anæsthesia with, Abs., Laurens, 274
- GUIRM. Ocular Manifestations of Vanillism, Abs., 85
- Gumma of the Ciliary Body, A Typical Case of—with Remarks upon Syphilitic Tumors of the Anterior Portion of the Uveal Tract, Dr. Oswalt, 97
- Gunshot Wound of the Frontal Sinus, Orbital Cellulitis produced by a, Abs., H. Davidson Schwarzhild, 255
- HALL, DE HAVILAND. A Case of Mycosis Fungoides, Abs., 73
- Heart Disease, Recurring Monocular Retinal Hemorrhages from, Abs., David Webster, 172
- Hemorrhage, Intra-Ocular, After the Extraction of Cataract, Two Cases, Harold Wilson, 300
- Hemorrhage, Pharyngeal, A Case of Fatal, Abs., G. E. Brewer, 260
- Hereditary Syphilis Simulating Adenoid Vegetations, Abs., Garel, 362
- Herpes, Laryngeal, Abs., Secretan, 178

- High Myopia, The Treatment of, by Aphakia, L. Y. Baker, 294
- HILBERT. Color Audition, Abs., 252
- HIRSCHBERG. Retinitis in Congenital Syphilis, Abs., 253
- Hydraulic Curetting of the Cornea, Abs., Santarnecchi, 84
- Hypnotism, Mydriasis Cured by, J. Arthur Booth, Abs., 74
- Ichthyol in Affections of the Eye, Germani, 364
- Idiopathic Serous Cysts of the Iris, Abs., Ginsberg, 255
- ILLINGWORTH, C. R. Some Points in the Anatomy and Physiology of the Larynx, Abs., 82
- Immature Cataracts, Extraction of, Abs., G. E. de Schweinitz, 265
- Incision of Retro-Pharyngeal Abscess According to Antiseptic Principles; From the Neck, Abs., Willy Meyer, 264
- Indications for Operating in Insufficiencies of the Ocular Muscles, Abs., Francis Valk, 269
- Infectious Diseases of the Eye, Experimental Researches upon, Abs., Max Perles, 263
- Inferior Rectus, A Peculiar Injury to the, G. Maxwell Christine, 334
- Inflammations, Adenoid, of the Pharyngeal Vault, William S. Pear-sall, 304
- Injury, Peculiar, to the Inferior Rectus, G. Maxwell Christine, 334
- Inspection of the Larynx and Trachea without a Mirror, Dr. Alfred Kirstein, 38
- Insufficiencies of the Ocular Muscles; Indications for Operating in, Abs., Francis Valk, 269
- Intermittent Exophthalmos, Abs., P. V. Richter, 259
- Intermittent Laryngeal Cry, A Case of Uncontrollable, Abs., Bond, 353
- Intra-Ocular Hemorrhage after the Extraction of Cataract. Two Cases, Harold Wilson, 300
- Iris, Idiopathic Serous Cysts of the, Abs., Ginsberg, 255
- Iris, Prolapse of the, Repair of Corneo-Scleral Wounds, with, Abs., G. E. de Schweinitz, 266
- Iris, Uveitis of the, True Iritis and, Abs., Grandclement, 361
- Iritis Papulosa, M. Ruth Worrall, 132
- Iritis, True, and Uveitis of the Iris, Abs., Grandclement, 361
- JABOULAY. Division of the Cervical Sympathetic in Cases of Exophthalmic Goiter, Abs., 350
- JOAL. Laryngeal Congestions of Nasal Origin, Abs., 358
- Joint, Left, Crico-Arytenoid, A Case of Perichondritis of, from an Unusual Cause, Abs., H. S. Birkett, 354
- JONES AND BUXTON. Endothelioma of the Brain, Abs., 80
- KAYSER, RICH. On the So-Called Pharyngo-Therapy, Abs., 349
- KEELER, E. ELMER. The Prevention of Some Forms of Throat Disease, 136
- KELLOGG, FRANCIS B. Two Cases of Mastoid Operation, 111
- KELLY, FRANCIS J. To What Extent is Tonsillitis Contagious? Abs., 270
- Keratotomy, New Method, for Irdec-tomy for Cataract Extraction, in Case of Complete Obliteration of the Anterior Chamber, Abs., A. Darier, 350
- KIRSTEIN, DR. ALFRED. Autocopy of the Larynx and Trachea. Its Inspection without a Mirror, 38
- KNAPP, H. Cavernous Angioma of the Orbit, Abs., 176
- KOPLIK, HENRY. Retro-Pharyngeal Abscess of Infancy and Childhood, Abs., 272
- KRASKE. A New Operation for Difficult Cases of Cleft Palate, Abs., 178
- Lachrymal Glands of Mammals, The Nerve Terminations in, Abs., Dogiel, 72
- Lachrymal Sac, A Simple Method of Destroying the, Abs., Durr, 259
- Laryngeal Cry. A Case of Uncontrollable, Intermittent, Abs., Bond, 353
- Laryngeal Congestions of Nasal Origin, Abs., Joal, 358
- Laryngeal Herpes, Abs., Secretan, 178
- Laryngeal Surgery, Roentgen Rays in, Abs., John MacIntyre, 265
- Laryngeal Vertigo, Abs., Merklen, 261
- Laryngitis, Chronic, and its Treatment. Chas. E. Teets, 121
- Larynx, A Case of Papilloma of the,



- Cured by Applications of Absolute Alcohol, Abs., Delevan, 260
- Larynx and Trachea, Autopsy of the. Its Inspection without a Mirror, Dr. Alfred Kirstein, 38
- Larynx, Erysipelas of the, Remarks on, Abs., C. Otto, 357
- Larynx, Some Points in the Anatomy and Physiology of the, Abs., C. R. Illingworth, 82
- Lateral Sinus, A Case of Thrombosis of the, with Recovery after Operation, Abs., Jno. L. Adams, 346
- LAURENS. Anæsthesia with Guaiacolized Oil, Abs., 274
- LAVAGNO, DR. Arecoline, a Myotic, Abs., 80
- LEMOINE, G. A Bacteriological Study of the Throat in One Hundred and Seventeen Cases of Scarlet Fever, Abs., 271
- Lenses Luxated into the Vitreous Body, Extraction of Two, Abs., Eversbuch, 262
- Lens, Extraction of the Transparent, as a Prophylactic Measure in Progressive Myopia of High Degree and in Detachment of the Retina, Abs., L. Vacher, 346
- Lids, Atrophy of the, Abs., Fuchs, 258
- Ligation of Post-Auricular Vessels for the Relief of Tinnitus Aurium, A Case of, Howard P. Bellows, 187
- Light and Refraction, A Study in, W. U. Reynolds, 51
- Lipoma of the Tonsil, Abs., Onodi, 178
- Looking Backward at Strabismus, Thos. M. Stewart, 318
- MACINTYRE, JOHN. Roentgen Rays in Laryngeal Surgery, Abs., 265
- MACKENZIE, G. HUNTER. The Treatment of Ozena. A Preliminary Note, Abs., 72
- Malignant Disease of the Middle Ear, Fatal Case of, Abs., Story, 71
- Malignant Pseudo-Plasms of the Orbit, Professor Panas, 192
- MANDELSTAMM. A Rare Case of Syphilitic Disease of the Orbit, Abs., 262
- MANN, J. E., Fibromata of Nasopharynx, 9
- Mastoid Operation, Two Cases of, Francis B. Kellogg, 111
- Mastoid, Treatment of Acute Inflammation of the Middle Ear and, Abs. E. B. Dench, 73
- Materia Medica and Therapeutics of the Eye, C. C. Boyle, 45, 146, 209, 337
- Materia Medica of the Ear, Wm. E. Rounds, 27
- Materia Medica of the Nose and Throat, A. Worrall Palmer, 58, 160, 239, 323
- MAYER, EMIL. Deviation of the Cartilaginous Septum; Its Cure, Abs., 78
- MELLINGER AND BOSSALINO. Experimental Study of the Distribution of Liquids Injected Beneath the Conjunctiva, Abs., 252
- MERKLEN. Laryngeal Vertigo, Abs., 261.
- MEYER, WILLY. Incision of Retropharyngeal Abscess According to Antiseptic Principles: From the Neck, Abs., 264
- Microscopist, What to Send to the, and How to Prepare It, Abs., T. E. Oertel, 254
- Middle Ear, On the Value of the Ophthalmoscope as an Aid to the Diagnosis of Cerebral Disease in Purulent Affections of the, Abs., Thos. R. Pooley, 360
- MORAX, V. Ocular Disturbances Observed in a Case of Epithelioma of the Sphenoidal Sinus, Abs., 357
- Muscles, Ocular, Elongation of the, in the Treatment of Non-Paralytic Strabismus, Abs., Panas, 258
- Muscles, Ocular, Indications for Operating in Insufficiencies of the, Abs., Francis Valk, 269
- Muscles, Recti, An Operation for the Advancement of the, C. C. Boyle, 129
- Mycosis Fungoides, A Case of, Abs., De Haviland Hall, 73
- Mydriasis Cured by Hypnotism, J. Arthur Booth, Abs., 74
- Myopia, High, The Treatment of, by Aphakia, L. Y. Baker, 294
- Myopia, Operative Treatment of, with Remarks upon Cataract Extraction, Abs., Vossius, 71
- Myopia, Progressive, of High Degree, Extraction of the Transparent Lens as a Prophylactic Measure in, and in Detachment of the Retina, Abs., L. Vacher, 346

- Nasal Obstruction, Etiology of, Abs., Mayo Collier, 267
- Nasal Origin, Laryngeal Congestions of, Abs., Joal, 358
- Nasal Septum, Primary Lesion of the, Abs., Garel, 84
- Nasal Stenosis, Effects on the Ear of, Abs., Randall, 83
- Naso-Pharynx, Fibromata of, J. E. Mann, 9
- Nerve, Optic, Alveolar Sarcoma of the, Abs., F. W. Ring, 86
- Nerve Terminations in Lachrymal Glands of Mammals, Abs., Dogiel, 72
- Nerve, Third, Recurrent Paralysis of the, in Women, Abs., T. Y. Sutphen, 253
- Nerve, Trigeminal, The Results of Sections of the, with Reference to the So-Called "Trophic" Influence of the Nerve on the Cornea, Abs., Wm. Aldren Turner, 168
- Neurological Aspect of Asthenopia, Abs., H. Gradle, 76
- New Method Keratotomy for Iridectomy for Cataract Extraction, in case of Complete Obliteration of the Anterior Chamber, Abs., A. Darier, 350
- Night-Blindness, Nux Vomica in, Abs., M. L. Sicar, 274
- Nose and Throat, *Materia Medica* of the, A. Worrall Palmer, 58, 160, 239, 323
- Nux Vomica in Night-Blindness, Abs., M. L. Sicar, 274
- Obliteration, Complete, of the Anterior Chamber, New Method Keratotomy for Iridectomy for Cataract Extraction in Case of, Abs., A. Darier, 350
- Ocular Affections and Sinusitis of Dental Origin, A Contribution to the Study of, Dr. Alph. Pechin, 217
- Ocular Disturbances Observed in a Case of Epithelioma of the Sphenoidal Sinus, Abs., V. Morax, 357
- Ocular Manifestations of Vanillism, Abs., Guirm, 85
- Ocular Muscles, Insufficiencies of the, Indications for Operating in, Abs., Francis Valk, 269
- OERTEL, T. E. What to Send to the Microscopist, and How to Prepare It, Abs., 254
- ONODI. Lipoma of the Tonsil, Abs., 178
- On the Electro-Vibration of the Turbinated Tissue, J. Mount Bleyer, 277
- On the So-Called Pharyngo-Therapy, Abs., Rich. Kayser, 349
- On the Value of the Ophthalmoscope as an Aid to the Diagnosis of Cerebral Disease in Purulent Affections of the Middle Ear, Abs., Thos. R. Pooley, 360
- Operating in Chronic Glaucoma, Abs., Priestly Smith, 171
- Operating in Insufficiencies of the Ocular Muscles, Indications for, Abs., Francis Valk, 269
- Operation for Advancement of the Recti Muscles, C. C. Boyle, 129
- Operation for Cases of Congenital Ptosis, Abs., J. Osecroft Tansley, 174
- Operation, Mastoid, Two Cases of, Francis B. Kellogg, 111
- Operation, Nasal, Chronic Deafness Relieved by, H. F. Fisher, 214
- Operation, New, for Difficult Cases of Cleft Palate, Abs., Kraske, 178
- Operative Treatment of Myopia, with Remarks upon Cataract Operation, Abs., Vossius, 71
- Operative Treatment of Pterygium, Abs., Edouard Boeckmann, 350
- Ophthalmia, Purulent, Formalin in the Treatment of, Abs., E. Oliver Belt, 354
- Ophthalmoscope, On the Value of the, as an Aid to the Diagnosis of Cerebral Disease in Purulent Affections of the Middle Ear, Abs., Thos. R. Pooley, 360
- Optic Nerve, Alveolar Sarcoma of the, Abs., F. W. Ring, 86
- Optic Neuritis Secondary to Ozena, Abs., D. E. Sulzer, 72
- Orbital Cellulitis Produced by a Gun-shot Wound of the Frontal Sinus, Abs., H. Davidson Schwarzschild, 255
- Orbital Tumors, The Course and Prognosis of, as Influenced by Surgical Operations for their Removal, Abs., Chas. Stedman Bull, 356
- Orbit, Cavernous Angioma of the, Abs., H. Knapp, 176
- Orbit, Cystic Angioma of the: Electrolysis, Abs., E. Valude, 85
- Orbit, Malignant Pseudo-Plasms of the, Professor Panas, 192
- Orbit, Sponge Grafting in the, for

- Support of Artificial Eye, Abs., E. Oliver Belt, 361
- Orbit, Syphilitic Disease of the, A Rare Case of, Abs., Mandelstamm, 262
- OSWALT, DR. A Typical Case of Gumma of the Ciliary Body—With Remarks upon Syphilitic Tumors of the Anterior Portion of the Uveal Tract, 97
- Otitis Media, Chronic Suppurative, A Case of Brain Abscess Secondary to, and Presenting Unusual Symptoms, Operation, Abs., Gorham Bacon, 351
- OTTO, C. Remarks on Erysipelas of the Larynx, Abs., 357
- Ozena, Bacteriology of, Abs., Fage, 178
- Ozena, Optic Neuritis Secondary to, Abs., D. E. Sulzer, 72
- Ozena, The Treatment of, A Preliminary Note, Abs., G. Hunter Mackenzie, 72
- Palate, Cleft, A New Operation for Difficult Cases of, Abs., Kraske, 178
- PALMER, A. WORRALL. *Materia Medica of the Nose and Throat*, 58, 160, 239, 323
- PANAS. Elongation of the Ocular Muscles in the Treatment of Non-Paralytic Strabismus, Abs., 258
- PANAS, PROF. Malignant Pseudo-Plasms of the Orbit, 192
- Papilloma of the Larynx, A Case of, Cured by Applications of Absolute Alcohol, Abs., Delevan, 260
- PARINAUD, H. The Sensitiveness of the Eye to the Colors of the Spectrum: the Functions of the Retinal Elements and the Visual Purple, 15
- Pathological Anatomy of Central and Perinuclear Cataracts, Abs., Von Hippel, 253
- PEARSALL, WILLIAM S. Adenoid Inflammations of the Pharyngeal Vault, 304
- PECHIN, DR. ALPH. A Contribution to the Study of Ocular Affections and Sinusitis of Dental Origin, 217
- Peculiar Injury to the Inferior Rectus, G. Maxwell Christine, 334
- Perichondritis of the Left Crico-Arytenoid Joint from an Unusual Cause, A Case of, Abs., H. S. Birkett, 354
- PERLES, MAX. Experimental Researches upon Infectious Diseases of the Eye, Abs., 263
- Pharyngeal Hemorrhage, A Case of Fatal, Abs., G. E. Brewer, 260
- Pharyngeal Vault, Adenoid Inflammations of, William S. Pearsall, 304
- Pharyngitis, A Form of, Permitting the Recognition of Diabetes or Albuminuria, Abs., Garel, 272
- Pharyngo-Therapy, On the So-called, Abs., Rich. Kayser, 349
- Physiology of the Larynx, Some Points in the Anatomy and, Abs., C. R. Illingworth, 82
- Points to Remember, Chas. E. Teets, 167
- POOLEY, THOS. R. On the Value of the Ophthalmoscope as an Aid to the Diagnosis of Cerebral Disease in Purulent Affections of the Middle Ear, Abs., 360
- Primary Lesion of the Nasal Septum, Abs., Garel, 84
- Processes, Alveolar, Tuberculosis of the, Abs., Zandy, 363
- Prognosis, The Course and, of Orbital Tumors, as Influenced by Surgical Operation for their Removal, Abs., Chas. Stedman Bull, 356
- Progress in Brain Surgery, Von Bergmann, 75
- Prolapse of the Iris, Repair of Corneo-Scleral Wounds, with, Abs., G. E. de Schweinitz, 266
- Pseudo-Plasms, Malignant, of the Orbit, Professor Panas, 192
- Pterygium, Operative Treatment of, Abs., Edouard Boeckmann, 350
- Ptosis, Congenital, An Operation for Cases of, Abs., J. Osecroft Tansley, 174
- Pupil, A Novel Case of Reflex Immobility of One, Abs., Seggel, 257.
- Purulent Ophthalmia, Formalin in the Treatment of, Abs., E. Oliver Belt, 354
- RANDALL. Effects on the Ear of Nasal Stenosis, Abs., 83
- Rare Phenomena in a Case of Detachment of the Retina, Abs., Baquis, 85
- Rectus, Inferior, A Peculiar Injury to the, G. Maxwell Christine, 334
- Recurrent Paralysis of the Third Nerve in Women, Abs., T. Y. Sutphen, 253
- Recurring Monocular Retinal Hemor-



- rhages from Heart Disease, Abs., David Webster, 172
- REED, ROBT. G. A Case, 320
- REED, ROBT. G. Accommodation and Convergence, 117
- Reflex Epilepsy of Nasal Origin, Abs., Seithoff, 177
- Reflexes, Aural, Abs., MacLeod Yearsley, 358
- Reflex Immobility of One Pupil, A Novel Case of, Abs., Seggel, 257
- Refraction, A Study in Light and, W. U. Reynolds, 51
- Remarks on Erysipelas of the Larynx, Abs., C. Otto, 357
- Remedies, New, in the Treatment of Diseases of the Upper Air Passages, Abs., C. E. Munger, 364
- Removal of a Foreign Body from the Bronchus, Abs., Hamilton, 363
- Repair of Corneo-Scleral Wounds, with Prolapse of the Iris, Abs., G. E. de Schweinitz, 266
- Representation of Abduction of the Vocal Cords in the Cerebral Cortex, Abs., Russell, 168
- Researches, Experimental, Upon Infectious Diseases of the Eye, Abs., Max Perles, 263
- Resection and Suture of the Trachea, Abs., Erselberg, 364
- Respiratory Tract, the Effect of Salicylic Acid upon the Mucous Membrane of the, Abs., Ludwig Ebstein, 271
- Retina, Detachment of the, Extraction of the Transparent Lens as a Prophylactic Measure in Progressive Myopia of a High Degree and in, Abs., L. Vacher, 346
- Retina, Four Cases of Bi-lateral Glioma of the, Cured by Enucleation of the Two Eyes, Abs., Treacher Collins, 171
- Retinal Hemorrhages, Recurring Monocular, from Heart Disease, Abs., David Webster, 172
- Retinitis in Congenital Syphilis, Abs., Hirschberg, 253
- Retro-Pharyngeal Abscess, Incision of, According to Antiseptic Principles; From the Neck, Abs., Willy Meyer, 264
- Retro-Pharyngeal Abscess of Infancy, and Childhood, Abs., H. Koplik, 272
- REYNOLDS, W. U. A Study in Light and Refraction, 51
- Rhinitis Caseosa, Abs., Arslan, 179
- RICHEY, O. S. The Fads and Fashions of Surgery, Abs., 349
- RICHTER, P. V. Intermittent Exophthalmos, Abs., 259
- RING, F. W. Alveolar Sarcoma of the Optic Nerve, Abs., 86
- Roentgen Rays in Laryngeal Surgery, Abs., John MacIntyre, 265
- ROUNDS, WM. E. *Materia Medica of the Ear*, 27
- RUSSELL. Representation of Abduction of the Vocal Cords in the Cerebral Cortex, Abs., 168
- Salicylic Acid, The Effect of, upon the Mucous Membrane of the Respiratory Tract, Abs., Ludwig Ebstein, 271
- SANTARNECCHI. Hydraulic Curetting of the Cornea, Abs., 84
- Sarcoma, Alveolar, of the Optic Nerve, Abs., F. W. Ring, 86
- Scarlet Fever, a Bacteriological Study of the Throat in One Hundred and Seventeen Cases of, Abs., G. Lemoine, 271
- SCHWARZCHILD, H. DAVIDSON. Orbital Cellulitis Produced by a Gunshot Wound of the Frontal Sinus, Abs., 255
- SECRETAN. Laryngeal Herpes, Abs., 179
- SEGCEL. A Novel Case of Reflex Immobility of One Pupil, Abs., 257
- SEITHOFF. Reflex Epilepsy of Nasal Origin, Abs., 177
- SENDZIAK, JOHN. Contribution to the Etiology of Bleeding Tumors of the Septum, Abs., 266
- SENDZIAK. Unusual Case of Syphilis of the Tonsil, Abs., 87
- Sensitiveness of the Eye to the Colors of the Spectrum; the Functions of the Retinal Elements and Visual Purple, H. Parinaud, 15
- Septum, Bleeding Tumors of the, a Contribution to the Etiology of, Abs., John Sendziak, 266
- Septum, Cartilaginous, Deviation of the; Its Cure, Abs., Emil Mayer, 78
- Septum, Nasal, Primary Lesion of the, Abs., Garel, 84
- Serous Cysts, Idiopathic, of the Iris, Abs., Ginsberg, 255
- Shadow, What is the Cause of the, in Skiascopy? Abs., Carl Weiland, 174
- SICAR, M. L. *Nux Vomica* in Night-Blindness, Abs., 274
- Sinus, Lateral, a Case of Thrombosis of the, with Recovery after Operation, Abs., Jno. L. Adams, 346

- Sinus, Sphenoidal, Ocular Disturbances Observed in a Case of Epithelioma of the, Abs., V. Morax, 357
- Skiascopy, What is the Cause of the Shadow in? Abs., Carl Weiland, 174
- SLEIGHT, B. H. B. Clinical Cases, 345
- SMITH, PRIESTLY. Operating in Chronic Glaucoma, Abs., 171
- Solutions, Warm Cocaine, the Advantage of, Abs., Costa, 363
- Some Points in the Anatomy and Physiology of the Larynx, Abs., C. R. Illingworth, 82
- Spectrum, Sensitiveness of the Eye to the Colors of the ; the Functions of the Retinal Elements and Visual Purple, H. Parinaud, 15
- Sphenoidal Sinus, Ocular Disturbances Observed in a Case of Epithelioma of the, Abs., V. Morax, 357
- Sponge Grafting in the Orbit for Support of Artificial Eye, Abs., E. Oliver Belt, 361
- Statistics, The, of Trachoma, Abs., E. Van Millingen, 82
- Stenosis, Nasal, Effects on the Ear of, Abs., Randall, 83
- STEWART, THOS. M. Looking Backward at Strabismus, 318
- STORY. Fatal Case of Malignant Disease of the Middle Ear, Abs., 71
- Strabismus, Looking Backward at, Thos. M. Stewart, 318
- Strabismus, Non-Paralytic, Elongation of the Ocular Muscles in the Treatment of, Abs., Panas, 258
- Study, Experimental, of the Distribution of Liquids Injected Beneath the Conjunctiva, Abs., Mellinger and Bossalino, 252
- Submucous Infiltration of the Sides of the Vomer, and its Treatment. Chas. E. Teets, 154
- Sudden Blindness with Complete Recovery, Abs., B. F. Travis, 271
- SULZER, D. E. Optic Neuritis Secondary to Ozena, Abs., 72
- Suppuration of the Middle Ear, Intractable, Treatment of, by Operation through the Mastoid, with Report of Eight Successful Cases, Abs., Thomas Barr, 80
- Suppurative Ethmoid Disease, Followed by Invasion of the Sphenoidal Sinus, Abscess of the Brain, and Death, Abs., F. H. Bosworth, 168
- Surgery, Laryngeal, Roentgen Rays in, Abs., John MacIntyre, 265
- Surgery, The Fads and Fashions of, Abs., O. S. Richey, 349
- SUTPHEN, T. Y. Recurrent Paralysis of the Third Nerve in Women, Abs., 253
- Sympathetic, Cervical, Division of the, in Cases of Exophthalmic Goiter, Abs., Jaboulay, 350
- Syphilis, Congenital, Retinitis in, Abs., Hirschberg, 253
- Syphilis, Hereditary, Simulating Adenoid Vegetations, Abs., Garel, 362
- Syphilis of the Tonsil, Unusual Case of, Abs., Sendziak, 87
- Syphilitic Disease of the Orbit, A Rare Case of, Abs., Mandelstamm, 262
- TANSLEY, J. OSCROFT. An Operation for Cases of Congenital Ptosis, Abs., 174
- TEETS, CHAS. E. Chronic Laryngitis and its Treatment, 121
- TEETS, CHAS. E. Points to Remember, 167
- TEETS, CHAS. E. Submucous Infiltration of the Sides of the Vomer and its Treatment, 154
- Temporary Amblyopia from Chocolate, A Case of, Abs., Casey A. Wood, 177
- The Advantage of Warm Cocaine Solutions, Abs., Costa, 363
- The Course and Prognosis of Orbital Tumors, as Influenced by Surgical Operations for their Removal, Abs., Chas. Stedman Bull. 356
- The Effect of Salicylic Acid upon the Mucous Membrane of the Respiratory Tract, Abs., Ludwig Ebstein, 271
- The Fads and Fashions of Surgery, Abs., O. S. Richey, 349
- The Neurological Aspect of Asthenopia, Abs., H. Gradle, 76
- The Pathological Anatomy of Central and Perinuclear Cataracts, Abs., Von Hippel, 253
- The Prevention of Some Forms of Throat Disease, E. Elmer Keeler, 136
- Therapeutics of the Eye, *Materia Medica* and, C. C. Boyle, 45, 146, 209, 337
- The Treatment of High Myopia by Aphakia, L. Y. Baker, 294

- The Sensitiveness of the Eye to the Colors of the Spectrum ; the Functions of the Retinal Elements and Visual Purple, H. Parinaud, 15
- The Statistics of Trachoma, Abs., E. Van Millingen, 82
- Throat Disease, The Prevention of Some Forms of, E. Elmer Keeler, 136
- Throat, *Materia Medica* of the Nose and, A. Worrall Palmer, 58, 160, 239, 323
- Thrombosis of the Lateral Sinus, A Case of, with Recovery after Operation, Abs., Jno. L. Adams, 346
- Tinnitus Aurium, A Case of Ligation of Post-Auricular Vessels for the Relief of, Howard P. Bellows, 187
- Tissue, Turbinated, Electro-Vibration of the, J. Mount Bleyer, 277
- Tonsilitis is Contagious, To What Extent? Abs., Francis J. Kelly, 270
- Tonsils, Elongated, Simulating Quinsy and Hysteria, Abs., Fenn, 84
- Tonsils, Faucial, Enlargement of, in Relation to Diseases of the Middle Ear, Abs., Ferreri and Garbini, 79
- Tonsil, Lipoma of the, Abs., Onodi, 178
- Tonsil, Syphilis of the, Unusual Case of, Abs., Sendziak, 87
- Torticollis Due to Adenoid Vegetations and Chronic Hypertrophy of the Tonsils, Abs., A. J. Gillette, 268
- To What Extent is Tonsilitis Contagious? Abs., Francis J. Kelly, 270
- Trachea, Autoscopy of the Larynx and. Its Inspection without a Mirror, Dr. Alfred Kirstein, 38
- Trachoma, The Statistics of, Abs., E. Van Millingen, 82
- TRAVIS, B. F. Sudden Blindness with Complete Recovery, Abs., 271
- Treatment of Acute Inflammation of the Middle Ear and Mastoid, Abs., E. B. Dench, 73
- Treatment of Dacryocystitis with Fluorol, Abs., Duclos, 86
- Treatment of Non-Paralytic Strabismus, Elongation of the Ocular Muscles in the, Abs., Panas, 258
- Treatment of Ozena. A Preliminary Note, Abs., G. Hunter MacKenzie, Abs., 72
- Treatment of Purulent Ophthalmia, Formalin in the, Abs., E. Oliver Belt, 354
- Treatment, Operative, of Myopia, with Remarks upon Cataract Extraction, Abs., Vossius, 71
- Treatment, Operative, of Pterygium, Abs., Edouard Boeckmann, 350
- Treatment, The, of High Myopia by Aphakia, L. Y. Baker, 294
- True Iritis and Uveitis of the Iris, Abs., Grandclement, 361
- Tuberculosis of the Alveolar Processes, Abs., Zandy, 363
- Tumors, Bleeding, of the Septum, A Contribution to the Etiology of, Abs., John Sendziak, 266
- Tumors, Orbital, The Course and Prognosis of, as Influenced by Surgical Operations for their Removal, Abs., Chas. Stedman Bull, 356
- Tumors, Syphilitic of the Anterior Portion of the Uveal Tract, Remarks upon, Dr. Oswalt, 97
- Turbinated Tissue, Electro-Vibration of the, J. Mount Bleyer, 277
- TURNER, WM. ALDREN. The Results of Sections of the Trigeminal Nerve, with Reference to the So-called "Trophic" Influence of the Nerve on the Cornea, Abs., 168
- Two Cases of Mastoid Operation, Francis B. Kellogg, 111
- Two Important Discoveries in the Treatment of Diphtheria, J. J. Fox, 200
- Uncontrollable, Intermittent Laryngeal Cry, A Case of, Abs., Bond, 353
- Unusual Case of Syphilis of the Tonsil, Abs., Sendziak, 87
- Uveal Tract, Remarks upon Syphilitic Tumors of the Anterior Portion of the, Dr. Oswalt, 97
- Uveitis of the Iris, True Iritis and, Abs., Grandclement, 361
- VACHER, L. Extraction of the Transparent Lens as a Prophylactic Measure in Progressive Myopia of High Degree and in Detachment of the Retina, Abs., 346
- VALK, FRANCIS. Indications for Operating in Insufficiencies of the Ocular Muscles, Abs., 269
- VALUDE, E. Cystic Angioma of the Orbit : Electrolysis, Abs., 85



- Vanillism, Ocular Manifestations of, Abs., Guirm, 85
- VAN MILLINGEN, E. The Statistics of Trachoma, Abs., 82
- VEEDER, M. A. Epistaxis through the Eyes, Abs., 170
- Vegetations, Adenoid, Hereditary Syphilis Simulating, Abs., Garel, 362
- Vertigo, Laryngeal, Abs., Merklen, 261
- Visual Purple, Functions of the Retinal Elements and; the Sensitiveness of the Eye to the Colors of the Spectrum, H. Parinaud, 15
- Vitreous, A Case of Extraction of a Bit of Copper from the, where X-Rays Helped to Locate the Metal, Abs., Chas. H. Williams, 358
- Vitreous Body, Extraction of Two Lenses Luxated into the, Abs., Eversbuch, 262
- Vocal Cords, Representation of Abduction of the, in the Cerebral Cortex, Abs., Russell, 168
- VOLLERT. Euaine in Ophthalmic Practice, Abs., 354
- Vomer, Submucous Infiltration of the Sides of the, and its Treatment. Chas. E. Teets, 154
- VON BERGMANN. Progress in Brain Surgery, 75
- VON HIPPEL. The Pathological Anatomy of Central and Perinuclear Cataracts, Abs., 253
- VOSSIUS. The Operative Treatment of Myopia, with Remarks upon Cataract Operation, Abs., 71
- WEBSTER, DAVID. Cholesterin Crystals Following Extraction, Abs., 256
- WEBSTER, DAVID. Recurring Monocular Retinal Hemorrhages from Heart Disease, Abs., 172
- WEILAND, CARL. What is the Cause of the Shadow in Skiascopy? Abs., 174
- What is the Cause of the Shadow in Skiascopy? Abs., Carl Weiland, 174
- What to Send to the Microscopist, and How to Prepare It, Abs., T. E. Oertel, 254
- WILLIAMS, CHAS. H. A Case of Extraction of a Bit of Copper from the Vitreous, where X-Rays Helped to Locate the Metal, Abs., 358
- WILSON, HAROLD. Intra-Ocular Hemorrhage after the Extraction of Cataract, 300
- Women, Recurrent Paralysis of the Third Nerve in, Abs., T. Y. Sutphen, 253
- WOOD, CASEY A. A Case of Temporary Amblyopia from Chocolate, Abs., 77
- WORRALL, M. RUTH. Iritis Papulosa, 132
- X-Rays Helped to Locate the Metal, A Case of Extraction of a Bit of Copper from the Vitreous where, Abs., Chas. H. Williams, 358
- YEARSLEY, MACLEOD, Aural Reflexes, Abs., 355
- ZANDY. Tuberculosis of the Alveolar Processes, Abs., 363

Water-damaged August 1978.

Frozen and vacuum freeze-dried 1979.







